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**Summary of Sampling & Remedial
Activities for 2011 & 2012
1339 Newland Highway
Newland, North Carolina**

December 2012

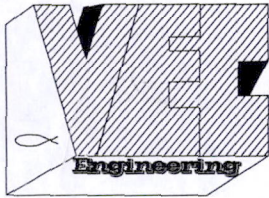
**Prepared for;
Household Mortgage Funding Corporation II**

**Prepared By;
VEC Engineering PLLC
1225 West Parks Road
Saint Johns, Michigan 48879**

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December 21, 2012

Mr. David E Ramey, P.G.
Inactive Hazardous Waste Sites Branch
Department of Environment and Natural Resources
610 East Center Avenue, Suite 301
Moorseville, NC 28115

Subject: Exploration and Remedial Activities Conducted during 2011 and 2012 at
1339 Newland Highway, Newland, NC, Avery County.

Dear Mr. Mosby:

VEC Engineering PLLC (VEC) prepared this letter and the attached report to update the North Carolina Department of Environment and Natural Resources (NCDENR) regarding the work conducted at the subject site. As you are aware VEC conducted some remedial activities and exploration during 2011 and completed additional exploration in 2012. The attached report summarizes the work completed and provides recommendations for further investigation activities at the site to complete the assessment of the pesticide impacts to soil and groundwater.

VEC and a representative of the site Owner would like to schedule a meeting with the NCDENR in Late January or early February to discuss these results, the proposed additional investigation and potential remediation of the site. Please advise us of times when a meeting may be scheduled for such discussions.

If you have any questions regarding this letter or the attached report please do not hesitate to contact us at (989)292-4245.

Sincerely,
VEC Engineering PLLC

A handwritten signature in blue ink, appearing to read 'Thomas J. Krasovec', written over a light blue horizontal line.

Thomas J. Krasovec, P.E.
President

Attachments

VEC Engineering PLLC

1225 West Parks Road
Saint Johns, Michigan 48879

Phone (989)292-4245

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Activities for 2011 & 2012
1339 Newland Highway
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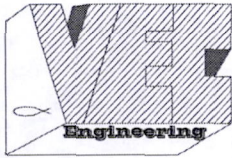
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BORING LOGS

FIELD DATA

FILE DISC



December 21, 2012

Mr. Chris Philipp
Director, Environmental Health & Safety
HSBC - North America
26525 N. Riverwoods Blvd.
Mettawa, IL 60045

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Subject: Summary of Additional Sampling and Recommendations for Remedial Actions for the site at 1339 Newland, Avery (Newland) North Carolina.

Dear Mr. Philipp:

VEC Engineering PLLC (VEC) has completed additional soil and groundwater sampling of the subject site. This report presents the results of the soil and groundwater sampling as well as VEC's conclusions and recommendations for addressing impacted soil and groundwater at the site.

Two known areas of impacted soils were excavated in 2011 and confirmation sampling was conducted. Impacted soils remained and two rounds of soil exploration were conducted to assess the remaining limits of the impacted soils. In addition, impacted groundwater was pumped from the onsite well in 2011 in an attempt to remove all of the impacted groundwater. The concentrations in the impacted groundwater have decreased but the groundwater still exceeds NCDENR criteria. Four monitoring wells were installed in 2012 to assess the limits of groundwater impacts. Three of the four monitoring well installed showed exceedances of NCDENR criteria. This report summarizes the remedial work conducted in 2011 and the exploration work conducted in 2012. Soil results were compared to Preliminary Residential Health - Based Soil Remediation Goals (PSRG) and Protection of Groundwater PSRG (GW-PSRG) as presented in the North Carolina Department of Environment and Natural Resources (NCDNER), "INACTIVE HAZARDOUS SITES BRANCH PRELIMINARY SOIL REMEDIATION GOALS (PSRG) TABLE, February 2012. Groundwater results were compared to the NCDENR "15A NCAC 2L .0202 Groundwater Standards and Interim Maximum Allowable Concentrations, Effective January 1, 2010. The preceding standards are noted as the initial goals in the NCDENR "Inactive Hazardous Site Program, Assessment and Cleanup Guidelines".

Site Description

The site is located in the northwest area of North Carolina, just outside the town of Newland. Figure 1 is a site location diagram.

VEC Engineering PLLC

1225 West Parks Road
Saint Johns, Michigan 48879

(989)292-4245 Phone
(989)292-4245 FAX

December 21, 2012

This is generally a mountainous area characterized by rolling and steep slopes with valleys containing river drainages. The Newland area is the Avery County seat and is generally rural with limited industry, largely farming and some tourism. The site is located southeast of Newland on the Newland Highway (State Route 181). The structure at the site was built into the side of the hill on the east side of the highway and was removed in July 2011. The structure was a two-story residence with a concrete basement area and wood frame upper level.

The building was a duplex, with a small one-bedroom unit on the south side of the building (with no access to the basement area) and a larger two-bedroom unit on the north side of the building, with a stairway to the basement. A storage building was located to the south of the main structure. Due to the nature of the site and the impacts identified the structures were demolished in accordance with local and state regulations and properly disposed at the Avery County Landfill. An asbestos survey was conducted at the site prior to demolition and no asbestos containing materials were identified. Figure 2 is a general site plan prior to demolition of the structures.

The site slopes steeply from the east to the west to the Newland Highway. A fence is located on the eastern boundary of the site. Property to the south and east of the site is undeveloped and a radio station is located in a structure adjacent to the north, with Newland highway providing the western boundary of the site.

Kentucky Creek is located west of the highway in the valley, which lies approximately 20 feet below the elevation of the highway. The general area is rural with no public sewer or water services available. Currently there is a fiber optic line and a gas main present in the right-of-way for the road as well as general under the road piping of stormwater.

Document Review

VEC obtained a historic report from Environmental Data Resources (EDR) in 2004 for the site and general area, which provides historic data and available regulatory data base information for the selected site and within approximately 1 mile around the site. A copy of the EDR report will be provided upon request. We also contacted the County Assessor to obtain information regarding the historic ownership and use of the property. In addition, we attempted to obtain historic use information from local residents in the Assessor's Office and the realtor listing the property. Very little information was obtained from the Assessor's Office, however a local realtor reported to us that a local resident had stated that he worked at the premises when it was used for mixing chemicals to make DDT. This resident advised him that chemicals were loaded from bags on the upper level into a mixing bin which extended to the lower level and that the bags were commonly discarded outside to the east of the structure and burned when enough bags had piled up. The described burning location is shown on Figure 2.

Our review of the EDR report, noted no listed releases at the site or within 1 mile of the site.

VEC Engineering PLLC

1225 West Parks Road
Saint Johns, Michigan 48879

(989)292-4245 Phone
(989)292-4245 FAX

No visual evidence of the site being used as a former mixing facility for herbicides or pesticides was identified. A review of the tax assessor's records noted a company "Mike Inc. " which owned the site during the 1950's and 1960's. The President of the company was noted as Joe E. Michael. The property was then sold to Joe E. Michael and Sharon A. Michael in 1967 for the sum of \$10. It appears that this is the same Joe E. Michael, the president of Mike Inc. The period of time that the property was owned by Mike Inc. and Joe and Sharon Michael corresponds with the purported time the facility was used for chemical mixing of DDT. The EDR report also noted a potential water supply well within approximately ¼ mile of the site; three water supply wells within approximately ½ mile; one public water well within approximately ½ mile to the east; and several other water supply wells within approximately one mile of the site.

Remedial Activities Completed in 2011

Due to the potential impacts and the condition of the structures, the structures were demolished and the demolition debris was properly disposed in the Avery County Landfill. Prior to demolition an area of the wood trusses and flooring was removed due to visible impacts and wipe test results showing concentrations of pesticides. The removed wood materials were placed on plastic and covered until the proposed soils excavation work was completed. The wood and soils were subsequently disposed as hazardous waste.

The initial investigation work at the site in 2004 and 2005 suggested that the areas of impacted soils were localized. Impacted soils were noted in the presumed burn area on the upper level of the site and in the driveway area next to the onsite water well outside the former garage. As noted above, the soils from these localized areas were excavated and disposed as hazardous waste. Figure 3 shows the excavation areas of impacted soils removed and disposed in 2011, the onsite water well location and general site features. It appears that the impacted soils around the well may be causing the impacted groundwater in the well. Considering the preliminary investigative work, excavations of the two known soil impacted areas were completed in July 2011. The locations of the excavations are shown on Figure 3. Approximately 58,860 pounds (Approximately 29.9 Tons) of impacted soils and the wood noted above, were excavated from the two known impacted areas, placed in lined, licensed trucks and hauled to the Heritage-WTI Inc. disposal facility for proper disposal. The excavation sidewalls and floors were sampled, lined with plastic and backfilled for safety purposes. The confirmation samples showed exceedances for pesticides and are shown on Figure 3.

Based on the initial groundwater sampling showing exceedance of NCDENR criteria for dieldrin and heptachlor at low concentrations it was thought that the impacted water was localized and could be removed by pumping. In June 2011, 41,420 pounds (Approximately 4990 gallons) of water was pumped from the onsite water supply well, into a licensed tanker truck and hauled to the Heritage-WTI Inc. disposal facility for proper disposal. The well was sampled following the removal of the water and the only exceedance noted was for dieldrin.

VEC Engineering PLLC

1225 West Parks Road
Saint Johns, Michigan 48879

(989)292-4245 Phone
(989)292-4245 FAX

Based on the results of the well sample and confirmation sampling of the two excavations additional investigation of the soils and groundwater was necessary.

Additional Subsurface Investigation

Soil borings/probes P-1 through P-14 were completed in February 2012 to assess the limits of impacted soils in the areas of the excavations. Based on the laboratory results of the samples obtained from probes P1 through P-14 additional exploration was necessary to assess the limits of the impacted soils. Soil borings/probes TP-15 through TP-25 were completed in July 2012. All of the borings were completed with a geoprobe and each of the borings was extended to 10 foot below existing grade at each location. Continuous sampling was completed at 5 foot intervals. Samples were collected at 2 foot intervals (0-2', 2'-4', 4'-6', 6'-8' and 8'-10'). The samples were placed in clean jars, sealed and placed on ice for shipping to the analytical laboratory. Soil samples were analyzed for pesticides in accordance with EPA method 8081B. The selection of soils for analyses was based on visual and olfactory evidence and the results of analytical testing of select samples. Samplers were decontaminated between each sample and a new plastic liner was placed in the sampler. All excess soils and liners were placed in 55-gallon drums and sealed for disposal.

Borings P-1 through P-7 and TP-20 through TP-25 were completed in the area of excavation 2 near the onsite water well in February and July 2012 respectively. Figure 4 shows the excavations and sampling locations for excavation 2. The initial February borings were completed at approximately 5 or 10 feet from the former excavation limits and the July borings were completed at approximately 15 to 20 feet from the limits. Boring P-3 was completed in the approximate middle of the excavation to assess the vertical limits of the impacted soils. In general, borings completed in areas south of the excavation (P-5, P-6, TP-24 and TP-25) contained approximately 1 to 3 feet of fill that was silty sands with gravel and trace clay. Below the fill soils silty, clayey sand was encountered to 5 to 8 feet below grade and was underlain by silty sand and gravel to maximum depth explored at each location. Borings to the north of the excavation (P-1, P-2, TP-20 and TP-21) contained silty clay or weathered siltstone throughout the depth of the borings. Borings to the east and west of the excavation were similar in nature to the southern borings. Detailed boring logs are attached for reference. The soils encountered were generally dry to moist in nature and dense.

Borings P-8 through P-14 and TP-15 through TP-19 were completed in the area of excavation 1 in February and July 2012 respectively. Figure 5 shows the boring locations for excavation 1. The initial February borings were completed at approximately 5 or 10 feet from the former excavation limits and the July borings were completed at approximately 15 to 20 feet from the limits. Boring P-8 was completed in the approximate middle of the excavation to assess the vertical limits of the impacted soils. In general, brown clayey sand to sandy clay was encountered in each of the borings from the surface to 4 to 6 feet below grade and was underlain by tan to green to gray weather siltstone to the maximum depth explored at each location.

VEC Engineering PLLC

1225 West Parks Road
Saint Johns, Michigan 48879

(989)292-4245 Phone
(989)292-4245 FAX

The degree of weathering decreases with depth. Detailed boring logs are attached for reference. The soils encountered were generally dry to moist in nature and dense. No groundwater was encountered in any of the borings completed

Soil samples were obtained continuously in each of the borings and discrete samples were obtained from 0-2', 2-4', 4-6', 6-8' and 8-10' from each of the borings.

Samples were selected for analytical testing for pesticides in order to assess the limits of impacted soils at the site. The soil samples were placed in clean glass jars and placed on ice for delivery to the laboratory. The remaining soil cuttings and plastic liners were placed in 55-gallon drums and sealed for disposal. The excavation and boring locations are shown on Figure 6.

Monitoring Well Installation

Four monitoring wells, MW-1 through MW-4 were installed in July 2012. Monitoring well MW-1 was installed along the eastern boundary of the site to assess the up gradient groundwater quality. Monitoring well MW-2 was installed near the middle of the site below the former building location. Monitoring wells MW-3 and MW-4 were installed along the western property boundary in the right-of-way of Route 181 to assess the down gradient groundwater quality and to assess if impacted groundwater is flowing offsite. A summary of the wells installed is provided below:

Monitoring Well Installation Summary

MW-1	Screened Interval – 42' - 52'	Total Depth – 52'
MW-2	Screened Interval- 37' - 47'	Total Depth – 47'
MW-3	Screened Interval- 37' - 47'	Total Depth – 47'
MW-4	Screened Interval- 33' - 43'	Total Depth – 43'

Boring logs and monitoring well installation logs are attached. The monitoring wells were developed using a submersible pump and the development water was collected in 55-gallon drums for disposal. The wells were allowed to equilibrate for approximately 2 weeks before sampling. Each monitoring well was fitted with 1/4" PVC tubing extending the full depth of the well. The monitoring wells were sampled by Low Flow methods using a flow through cell, a YSI meter and a peristaltic Geopump. During purging the Ph, Specific Conductance, Dissolved Oxygen, Temperature, pumping rate and draw down were measured at 5 to 10 minute intervals. Once three consecutive samples/readings were within: +/- 0.1 Ph; +/-3% for specific Conductivity and Temperature; +/- 10 mv for Redox Potential; +/- 10% for Dissolved Oxygen, the well was sampled. Groundwater samples from each well were collected in 50 ml amber bottles, and placed on ice for transportation to the laboratory. The monitoring well locations are shown on Figure 6.

VEC Engineering PLLC

1225 West Parks Road
Saint Johns, Michigan 48879

(989)292-4245 Phone
(989)292-4245 FAX

Analytical Test Results

Select soil and all of the groundwater samples were analyzed for total pesticides. The results of the analytical testing from the soil samples collected from the excavations and borings were compared to "Preliminary Residential Health - Based Soil Remediation Goals" (PSRG) and the "Protection of Groundwater" (PSRG-PW) Criteria as published by the Inactive Hazardous Sites Branch and updated on February 2012. Previous analytical testing did not detect for Herbicides or Semivolatile Hydrocarbons and historic characteristic testing for disposal did not note any detections in the leachate with the exception of arsenic in an initial sample in 2011 and barium in a recent composite sample from the borings where pesticides exceeded NCDENR criteria. As such analytical testing has focused on pesticides.

Soils

Soil sampling was completed to assess the vertical and horizontal limits of the impacted soils in excavated areas. Figure 6 shows the locations of the borings completed and Figures 4 and 5 provide general sections for excavations 2 and 1 respectively. Figures 4 and 5 also generally show the samples that exceeded PSRG and/or PSRG-PW criteria or did not exceed either criterion. Figure 7 shows the borings and the estimated horizontal limits of the impacted soils at the site based on the preceding criteria. The results of the analytical testing, from the soil samples collected in July 2011 and February and July 2012, are summarized in Table 1. The 2011 sampling was conducted following the excavation of two known hot spots based on previous drilling and sampling. Excavations 1 and 2 are shown on Figure 3. The confirmation samples from the excavations exceeded NCDENR PSRGs. Exceedances were noted for one or more pesticide compounds. Figure 4 through 7 show the locations of the exceedances and estimated limits based on the 104 samples submitted from the borings completed in February and July 2012. The most common exceedances were noted for Dieldrin and Toxaphene, the Table below shows the criteria, the range of concentrations exceeding the criteria and the number of samples that exceeded the criteria.

Compound of Concern exceeding NCDENR Criteria	Preliminary Residential Health - Based Soil Remediation Goal (PSRG) ug/kg	Protection of Groundwater (PSRG) ug/kg	Range of Concentrations Encountered in Probe Samples ug/kg	Number of Samples Exceeding Criteria (of 140 total samples)
Aldrin	29	3.3	7.8 - 46	2
Beta - BHC	270	1.2	6.6 - 23	4
Alpha - BHC	77	0.36	3.3 - 1800	11

VEC Engineering PLLC

1225 West Parks Road
Saint Johns, Michigan 48879

(989)292-4245 Phone
(989)292-4245 FAX

Compound of Concern exceeding NCDENR Criteria	Preliminary Residential Health - Based Soil Remediation Goal (PSRG) ug/kg	Protection of Groundwater (PSRG) ug/kg	Range of Concentrations Encountered in Probe Samples ug/kg	Number of Samples Exceeding Criteria (of 140 total samples)
Lindane	520	1.8	4.2 - 49	7
4,4'-DDD	2000	240	260 - 9100	3
4,4'-DDE	1400	240	44 - 350	3
4,4'-DDT	1700	340	330 - 130,000	12
Dieldrin	30	0.81	2.7 - 9100	37
Heptachlor	110	6.6	6.9 - 630	4
Heptachlor Epoxide	53	0.82	6.1 - 18	4
Toxaphene	440	46	110 - 6400	20
Chlordane	1600	68	84 - 1200	3

Based on this comparison the estimated area of impacted soils associated with the two original excavations is shown on Figure 7. The estimated quantity of impacted soil is 1500 to 2500 cu.yds.

Groundwater

Groundwater sampling was conducted to assess if the impacted groundwater found in the onsite well was migrating offsite. Four monitoring wells were installed, one in a general up gradient area, one to the north of the onsite well and in a general down gradient area of the site. The monitoring well locations are shown on Figure 6. The monitoring wells were surveyed for location and top of casing elevations. Figure 8 shows the groundwater flow based on the elevations obtained and the depth to groundwater as measured on August 22, 2012. The groundwater from the site generally flows to the west - northwest.

VEC Engineering PLLC

1225 West Parks Road
Saint Johns, Michigan 48879

(989)292-4245 Phone
(989)292-4245 FAX

The NCDENR sampled the water supply for the radio station located adjacent to the northern boundary of the site and did not have any detection for pesticides in the water sample.

The onsite water well has been sampled on several occasions that included 2004, 2005, 2011 and 2012. The first sample in 2004 showed exceedances for 7 compounds and the only exceedance in the 2012 sample was for dieldrin. Also of note is the concentration of dieldrin in the well samples has been decreasing from 2004 through 2012 sampling. The monitoring wells were sampled on August 22, 2012. Sampling results are compared to NCDENR 2L criteria and summarized in Table 2.

Monitoring well MW-1 was installed on the up gradient, eastern edge of the site. NO compounds of concern were identified in the samples obtained from MW-1. Monitoring well MW-2 was installed near the middle of the site below the former building area. Exceedances of NCDENR 2L standard were noted for Delta-, Alpha- and Delta-BHC, Lindane, Dieldrin and Toxaphene. Monitoring well MW-3 was installed east of the onsite well along the down gradient or western edge of the property. Exceedances of NCDENR 2L standard were noted for delta-BHC, 4-4' DDE, Dieldrin Heptachlor Epoxide and Toxaphene were noted at MW-3. Monitoring well MW-4 was installed to the north west of the onsite well again along the down gradient or western edge of the property. The only exceedances for NCDENR 2L standard were for Dieldrin and Toxaphene at the MW-4 location.

Based on the subsurface information collected to date, it appears that groundwater exceeding NCDENR 2L standards water criteria may be migrating offsite to the west-northwest. It also appears that the reducing concentrations in the onsite water well may be associated with the remedial work conducted to date. We anticipate that once the sources in the soils are removed that the groundwater impacts will dissipate quickly.

Conclusions

Based on the results of the sampling and analytical testing completed at the site from November 2004 through July 2012, the soil and groundwater at the site have been impacted by the previous use of the site in making pesticides. The impacted soil extends below the former building area, which suggests that the floor area may not have always been concrete and historically was exposed during manufacturing operations. Only approximately 21 of the 104 recent samples exceeded PSRG and PSRG-GW criteria. Approximately 40 samples exceeded PSRG-GW. The sampling to date has not yet been able to completely define the limits of impacted soils. Due to the very low PSRG-GW for several of the compounds only a slight detection is necessary to exceed criteria. Analytical testing for disposal has shown that the pesticides do not leach from the soils. This should be further verified along with total analyses to determine an allowable maximum concentration for potentially leaving some of these soils in place untreated.

VEC Engineering PLLC

1225 West Parks Road
Saint Johns, Michigan 48879

(989)292-4245 Phone
(989)292-4245 FAX

December 21, 2012

In general the compounds of concern (COCs), in soils, that exceed groundwater protection criteria all are reported to be immobile or very slightly mobile. Most are thought to bind strongly to soils and degrade very slowly if at all under natural conditions, some of the COCs are more mobile in low pH fluids. Recent groundwater testing noted lower pH levels, on the order of 4 to 5 at some of the monitoring well locations. The lower pH may have allowed the COCs to become mobile in the groundwater.

It is apparent that the soils exceeding PSRG and unrestricted use criteria will require a remedial effort to address the direct contact and inhalation exposure routes. The complete limits of soils exceeding PSRG are not known, though we believe that the extents are reasonably estimated. The estimated extent of impacted soils is shown on Figures 4 through 7. Further assessment of soils exceeding PSRG-GW should be conducted to assess the need for any further remedial actions. This would include analyses of soils samples from varying depths and strata for total pesticides and for leachable pesticides by TCLP testing. TCLP results would be compared to allowable NCDENR criteria. If COCs are found to not leach from the soils, are below residential PSRG and do not extend to groundwater VEC believes the soils may remain onsite.

VEC has preliminarily assessed various preliminary options for remediating the soils at the site including, but not limited to; Excavation and Disposal; Insitu Bioremediation and Monitored Natural Attenuation.

Excavation and Disposal as Solid Waste: This is a viable remedial method for the soils, but will be cost prohibitive unless the soils can be disposed in a reasonable close Municipal Solid Waste (MSW) facility. As noted above current samples show exceedances for "Contained Out" criteria that would allow for the soils to be disposed in a licensed MSW landfill. We are assessing options for addressing this issue, including resampling after the soils have been excavated and stockpiled on site. If samples from the stockpile still exceed the "Contained Out" levels TCLP testing of the samples may be conducted and compared to "Contained-Out" Leachate levels. If the leachate levels are also exceeded an alternate disposal or treatment methods would need to be identified, or the soils would need to be disposed as hazardous waste. Disposal of the soils as hazardous waste is cost prohibitive. Estimated hauling and disposal fees only for a MSW facility are on the order of \$150 to \$200/ton depending on the facility's location. This method would require importing some fill materials to bring the site to safe grades. This method also leaves the long-term liability associated with the landfill disposal.

Excavation and Disposal as Hazardous Waste: This is a viable remedial method for the soils. This method would require the importing of some fill materials to bring the site to safe grades. This method also leaves the long-term liability associated with the landfill disposal. Disposal as hazardous waste would cost on the order \$1,200+/ton and is considered cost prohibitive.

Insitu Bioremediation: This method is viable for remediation of the soils, but will require some initial bench scale testing.

VEC Engineering PLLC

1225 West Parks Road
Saint Johns, Michigan 48879

(989)292-4245 Phone
(989)292-4245 FAX

December 21, 2012

Bioremediation of pesticides has historically been very difficult, however more recent attempts have been very successful for sites with higher concentrations than those noted at the subject site. Initial testing to assess the site-specific soil parameters of natural organic and inorganic compounds is necessary such that the optimal mixture of nutrients can be developed for the site. The nutrients would need to be applied to impacted soils and mixed into the soils. Due to the depth of soil impacts and the fined grained nature of the soils, industrial tilling would be necessary to assure the nutrients can access all affected soils to enhance the natural bioremediation. The affected areas would also need to be kept moist. This would be accomplished by setting a water system using the onsite wells and dispersed in a drip piping system. The onsite well would be used for moisture control, thereby allowing for bioremediation of the groundwater as well. The areas would need to be covered for a portion of the winter and checked monthly to assess progress. Additional applications of nutrients and tilling would be necessary on a monthly to bi-monthly basis. We anticipate that the bioremediation would be completed within 6 to 12 months. The placement of nutrients, tilling and watering of the system is estimated to be on the order of \$140/ton. This work would be conducted in-place and no additional fill would be needed for site grading.

Monitored Natural Attenuation: Currently this is not an option due to the unknown extent of the groundwater impacts. This would likely require deed restrictions, securing the site and long term monitoring.

VEC believes insitu bioremediation as described above be considered for the remediation at the site. Insitu bioremediation will take longer than the other options, but allows for treatment of the entire site and reduces or eliminates risk associated with:

- Exceeding the estimated quantity of impacted soils associated with closure sampling, considering the very low criteria for some of the COCs.
- Transportation of the impacted soils.
- Long-term liability associated with disposal in a landfill.
- Disposal costs increasing due to analytical data after sampling stockpiles.

In addition, bioremediation will remediate the groundwater used to control moisture at the site.

Recommendations

Based on the work completed to date the horizontal and vertical limits of the impacted soils and groundwater are not known. VEC recommends that additional exploration be conducted to verify the vertical and horizontal limits of the impacted soils and groundwater. The limits of groundwater impacts have not been defined.

VEC Engineering PLLC

1225 West Parks Road
Saint Johns, Michigan 48879

(989)292-4245 Phone
(989)292-4245 FAX


December 21, 2012

Groundwater was encountered at approximately 30 to 50 feet below grade during monitoring well installation. The onsite well extends to approximately 80 feet below grade and is likely screened across the shallower intervals. VEC recommends that the vertical and horizontal extents be defined to assess potential remedial actions. Specifically we recommend the following activities be completed to assess the limits of the soil and groundwater impacts.

- Complete additional sampling using a geoprobe to assess the horizontal limits of impacted soils and to obtain composite samples for assessment of disposal options. Samples with the highest concentrations of pesticides will also be analyzed by TCLP methods to verify leachability.
- Obtain soil samples for bench scale testing to assess parameters needed to complete bioremediation of the site.
- Complete a round of groundwater sampling and flow assessment for seasonal variants.
- Verify current water supply well locations within 1/2 mile of the site.
- Complete vertical profiling near the onsite water supply well and in stall wells as necessary to define and verify the vertical extent of impacted groundwater.
- Meet with NCDENR personnel to discuss the site conditions, remedial criteria, sampling of other private water supply wells or install monitoring wells west of Newland highway, downgradient of the site.
- Complete the remedial investigation for the site and present remedial options.

VEC recommends that we discuss the remedial activities with the state and local health department prior to initiating any activities. VEC greatly appreciates the opportunity to be of assistance. If you have any questions please feel free to contact us at the number noted below.

Sincerely,
VEC Engineering PLLC


Thomas J. Krasovec P.E.
President

VEC Engineering PLLC

1225 West Parks Road
Saint Johns, Michigan 48879

(989)292-4245 Phone
(989)292-4245 FAX

TABLES

TABLE 1
SUMMARY OF ANALYTICAL RESULTS FOR SOIL SAMPLING
NEWLAND, NORTH CAROLINA NOVEMBER 2012

CAS	Sample ID:	NCDENR Remediation Goals Migration to Groundwater	NCDENR Maximum Concentration	Preliminary Residential Health - Based Soil Remediation Goal (PSRG) UG/KG	Protection of Groundwater (PSRG) UG/KG	P-1 0-2'	P-1 2-4'	P-1 4-6'	P-1 6-8'	P-1 8-10'	P-2 0-2'	P-2 2-4'	P-2 4-6'	P-2 6-8'	P-2 8-10'	P-3 4-6'
	Lab Sample ID:					NB16042-001	NB16042-002	NB16042-003	NB16042-004	NB16042-005	NB16042-006	NB16042-007	NB16042-008	NB16042-009	NB16042-010	NB16042-011
	Collection Date:					2/13/2012	2/13/2012	2/13/2012	2/13/2012	2/13/2012	2/13/2012	2/13/2012	2/13/2012	2/13/2012	2/13/2012	2/13/2012
	Receipt Date:					2/16/2012	2/16/2012	2/16/2012	2/16/2012	2/16/2012	2/16/2012	2/16/2012	2/16/2012	2/16/2012	2/16/2012	2/16/2012
	Matrix:					SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Units of Measure:					ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
	Dilution:					500	1	10	1	1	1	1	1	1	1	20
	Compound Description					Results	Results	Results	Results	Results	Results	Results	Results	Results	Results	Results
309-00-2	Aldrin			29	3.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
319-85-7	beta-BHC			270	1.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
319-84-6	alpha-BHC			77	0.36	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
319-86-8	delta-BHC			120,000	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
58-89-9	gamma-BHC (Lindane)			520	1.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
72-54-8	4,4'-DDD	240		2000	240	ND	ND	120	ND	ND	ND	ND	ND	ND	ND	100
72-55-9	4,4'-DDE	240		1400	240	ND	ND	76	ND	ND	ND	2.9	ND	ND	ND	94
50-29-3	4,4'-DDT	340	1200	1700	340	4000	2.4	750	ND	ND	4.9	14	5.1	ND	ND	380
60-57-1	Dieldrin	0.8		30	0.81	6700	3.1	210	ND	ND	2.7	34	12	5	ND	67
959-98-8	Endosulfan I			74,000	5600	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
33213-65-9	Endosulfan II			74,000	5600	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1031-07-8	Endosulfan sulfate			NA	8000	ND	ND	80	ND	ND	ND	ND	ND	ND	ND	ND
72-20-8	Endrin	3600		3600	810	ND	ND	56	ND	ND	ND	4.8	ND	ND	ND	ND
7421-93-4	Endrin Aldehyde					ND	ND	52	ND	ND	ND	4.1	ND	ND	ND	ND
76-44-8	Heptachlor	110		110	6.6	630	ND	63	ND	ND	ND	ND	ND	ND	ND	ND
1024-57-3	Heptachlor Epoxide	53		53	0.82	ND	ND	27	ND	ND	ND	ND	ND	ND	ND	ND
72-43-5	Methoxchlor			62,000	22,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
8001-35-2	Toxaphene			440	46	51000	ND	ND	ND	ND	ND	120	ND	ND	ND	ND
53494-70-5	Endrin Ketone					ND	ND	54	ND	ND	ND	ND	ND	ND	ND	ND
5103-74-2	gamma-Chlordane	1600		1600	68	1200	ND	140	ND	ND	ND	4.7	ND	ND	ND	ND
5103-71-9	alpha-Chlordane	1600		1600	68	780	ND	65	ND	ND	ND	2.4	ND	ND	ND	ND

CAS	Sample ID:	NCDENR Remediation Goals Migration to Groundwater	Preliminary Residential Health - Based Soil Remediation Goal (PSRG) UG/KG	Protection of Groundwater (PSRG) UG/KG	P-13 0-2'	P-13 2-4'	P-13 4-6'	P-14 0-2'	P-14 2-4'	P-14 4-6'	P-14 6-8'	P-14 8-10'	TP-15 0-2'	TP-15 2-4'	TP-16 0-2'	
	Lab Sample ID:				NB16042-055	NB16042-056	NB16042-057	NB16042-060	NB16042-061	NB16042-062	NB16042-063	NB16042-064	NG20016-001	NG20016-002	NG20016-003	
	Collection Date:				2/13/2012	2/13/2012	2/13/2012	2/13/2012	2/13/2012	2/13/2012	2/13/2012	2/13/2012	2/13/2012	7/17/2012	7/17/2012	7/17/2012
	Receipt Date:				2/16/2012	2/16/2012	2/16/2012	2/16/2012	2/16/2012	2/16/2012	2/16/2012	2/16/2012	2/16/2012	7/20/2012	7/20/2012	7/20/2012
	Matrix:				SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Units of Measure:				ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
	Dilution:				1	1	1	1	1	1	1	1	1	1	1	1
	Compound Description				Results	Results	Results	Results	Results	Results	Results	Results	Results	Results	Results	Results
309-00-2	Aldrin		29	3.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
319-85-7	beta-BHC		270	1.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
319-84-6	alpha-BHC		77	0.36	ND	ND	ND	ND	ND	ND	ND	ND	7.4	ND	ND	
319-86-8	delta-BHC		120,000	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
58-89-9	gamma-BHC (Lindane)		520	1.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
72-54-8	4,4'-DDD		2000	240	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
72-55-9	4,4'-DDE	1700	1400	240	ND	ND	ND	ND	ND	ND	ND	ND	5.1	ND	2.5	
50-29-3	4,4'-DDT	1360	1700	340	ND	ND	ND	6.2	ND	ND	ND	ND	12	ND	5.4	
60-57-1	Dieldrin	1.13	30	0.81	ND	ND	ND	ND	ND	ND	ND	ND	5.6	ND	ND	
959-98-8	Endosulfan I		74,000	5600	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
33213-65-9	Endosulfan II		74,000	5600	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
1031-07-8	Endosulfan sulfate		NA	8000	ND	ND	ND	ND	ND	ND	ND	ND	5.1	ND	ND	
72-20-8	Endrin	3600	3600	810	ND	ND	ND	ND	ND	ND	ND	ND	5.1	3.5	ND	
7421-93-4	Endrin Aldehyde				ND	ND	ND	ND	ND	ND	ND	ND	5.6	ND	ND	
76-44-8	Heptachlor	110	110	6.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
1024-57-3	Heptachlor Epoxide	53	53	0.82	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
72-43-5	Methoxchlor		62,000	22,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
8001-35-2	Toxaphene		440	46	ND	ND	ND	ND	ND	ND	ND	ND	270	ND	ND	
53494-70-5	Endrin Ketone				ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
5103-74-2	gamma-Chlordane	1600	1600	68	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
5103-71-9	alpha-Chlordane	1600	1600	68	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	

BOLD NUMBERS NOTE AN EXCEEDANCE OF RESIDENTIAL HEALTH BASED SOIL REMEDIATION GOAL (PSRG)
SHADED NUMBERS NOTE EXCEEDANCES OF BOTH PSRG AND GROUNDWATER PROTECTION

TABLE 1
SUMMARY OF ANALYTICAL RESULTS FOR SOIL SAMPLING
NEWLAND, NORTH CAROLINA NOVEMBER 2012

Sample ID:	NCDENR Remediation Goals Migration to Groundwater	NCDENR Maximum Concentration	Preliminary Residential Health - Based Soil Remediation Goal (PSRG) UG/KG	Protection of Groundwater (PSRG) UG/KG	P-3 6-8'	P-3 8-10'	P-4 0-2'	P-4 2-4'	P-4 4-6'	P-5 0-2'	P-5 2-4'	P-5 4-6"	P-5 6-8'	P-5 8-10'	P-6 0-2'	P-6 2-4'
Lab Sample ID:					NB16042-012	NB16042-013	NB16042-014	NB16042-015	NB16042-016	NB16042-019	NB16042-020	NB16042-021	NB16042-022	NB16042-023	NB16042-024	NB16042-025
Collection Date:					2/13/2012	2/13/2012	2/13/2012	2/13/2012	2/13/2012	2/13/2012	2/13/2012	2/13/2012	2/13/2012	2/13/2012	2/13/2012	2/13/2012
Receipt Date:					2/16/2012	2/16/2012	2/16/2012	2/16/2012	2/16/2012	2/16/2012	2/16/2012	2/16/2012	2/16/2012	2/16/2012	2/16/2012	2/16/2012
Matrix:					SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Units of Measure:					ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Dilution:					1	1	5	1	1	5	50	2	1	1	1	5
Compound Description					Results	Results	Results	Results	Results	Results	Results	Results	Results	Results	Results	Results
Aldrin			29	3.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
beta-BHC			270	1.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
alpha-BHC			77	0.36	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
delta-BHC			120,000	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
gamma-BHC (Lindane)			520	1.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4,4'-DDD	240		2000	240	ND	ND	54	ND	ND	22	260	7.7	ND	ND	ND	100
4,4'-DDE	240		1400	240	ND	ND	44	ND	ND	140	350	23	ND	ND	ND	130
4,4'-DDT	340	1200	1700	340	ND	ND	630	ND	2.5	170	740	42	ND	ND	ND	100
Dieldrin	0.8		30	0.81	ND	ND	37	3.6	ND	22	590	17	ND	ND	ND	150
Endosulfan I			74,000	5600	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endosulfan II			74,000	5600	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endosulfan sulfate			NA	8000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endrin	3600		3600	810	ND	ND	ND	ND	ND	ND	160	ND	ND	ND	ND	14
Endrin Aldehyde					ND	ND	20	ND	ND	ND	210	ND	ND	ND	ND	50
Heptachlor	110		110	6.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor Epoxide	53		53	0.82	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methoxchlor			62,000	22,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toxaphene			440	46	ND	ND	730	ND	ND	520	6400	230	ND	ND	ND	580
Endrin Ketone					ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
gamma-Chlordane	1600		1600	68	ND	ND	12	ND	ND	ND	84	ND	ND	ND	ND	ND
alpha-Chlordane	1600		1600	68	ND	ND	ND	ND	ND	ND	85	ND	ND	ND	ND	ND

Sample ID:	NCDENR Remediation Goals Migration to Groundwater		Preliminary Residential Health - Based Soil Remediation Goal (PSRG) UG/KG	Protection of Groundwater (PSRG) UG/KG	TP-16-2-4'	TP-17-0-2'	TP-17-2-4'	TP-18-0-2'	TP-18-2-4'	TP-19-0-2'	TP-19-2-4'	TP-20-0-2'	TP-20-2-4'	TP-20-4-6'	TP-20-6-8'	TP-20-8-10'
Lab Sample ID:					NG20016-004	NG20016-005	NG20016-006	NG20016-007	NG20016-008	NG20016-009	NG20016-010	NG20016-011	NG20016-012	NG20016-013	NG20016-014	NG20016-015
Collection Date:					7/17/2012	7/17/2012	7/17/2012	7/17/2012	7/17/2012	7/17/2012	7/17/2012	7/17/2012	7/17/2012	7/17/2012	7/17/2012	7/17/2012
Receipt Date:					7/20/2012	7/20/2012	7/20/2012	7/20/2012	7/20/2012	7/20/2012	7/20/2012	7/20/2012	7/20/2012	7/20/2012	7/20/2012	7/20/2012
Matrix:					SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Units of Measure:					ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Dilution:					1	1	5	1	1	1	1	1	1	1	1	1
Compound Description					Results	Results	Results	Results	Results	Results	Results	Results	Results	Results	Results	Results
Aldrin			29	3.3	ND	ND	ND	ND	ND	ND	46	7.8	ND	ND	ND	ND
beta-BHC			270	1.2	ND	ND	ND	ND	ND	ND	23	9.6	ND	ND	ND	ND
alpha-BHC			77	0.36	ND	47	ND	ND	ND	21	ND	3.4	ND	ND	ND	ND
delta-BHC			120,000	NA	ND	ND	ND	ND	ND	ND	ND	5.8	ND	ND	ND	ND
gamma-BHC (Lindane)			520	1.8	ND	ND	ND	ND	ND	ND	13	5.9	ND	ND	ND	ND
4,4'-DDD			2000	240	ND	98	52	ND	ND	74	1500	140	ND	2.9	ND	ND
4,4'-DDE	1700		1400	240	ND	55	37	ND	ND	27	310	110	ND	ND	ND	ND
4,4'-DDT	1360		1700	340	ND	79	17	ND	ND	16	390	1600	ND	46	ND	ND
Dieldrin	1.13		30	0.81	ND	42	ND	ND	ND	16	150	100	ND	ND	ND	ND
Endosulfan I			74,000	5600	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endosulfan II			74,000	5600	ND	ND	ND	ND	ND	ND	81	73	ND	ND	ND	ND
Endosulfan sulfate			NA	8000	ND	ND	ND	ND	ND	ND	95	ND	ND	ND	ND	ND
Endrin	3600		3600	810	ND	6.1	ND	ND	ND	3.5	60	120	ND	ND	ND	ND
Endrin Aldehyde					ND	25	ND	ND	ND	4	ND	ND	ND	ND	ND	ND
Heptachlor	110		110	6.6	ND	ND	ND	ND	ND	ND	ND	6.3	ND	ND	ND	ND
Heptachlor Epoxide	53		53	0.82	ND	ND	ND	ND	ND	ND	ND	18	ND	ND	ND	ND
Methoxchlor			62,000	22,000	ND	ND	ND	ND	ND	ND	100	130	ND	ND	ND	ND
Toxaphene			440	46	ND	400	ND	ND	ND	110	ND	ND	ND	ND	ND	ND
Endrin Ketone					ND	ND	ND	ND	ND	ND	21	ND	ND	ND	ND	ND
gamma-Chlordane	1600		1600	68	ND	8.1	ND	ND	ND	5.4	58	ND	ND	ND	ND	ND
alpha-Chlordane	1600		1600	68	ND	8	ND	ND	ND	4.8	41	42	ND	ND	ND	ND

BOLD NUMBERS NOTE AN EXCEEDANCE OF RESIDENTIAL HEALTH BASED SOIL REMEDIATION GOAL (PSRG)
SHADED NUMBERS NOTE EXCEEDANCES OF BOTH PSRG AND GROUNDWATER PROTECTION

TABLE 1
SUMMARY OF ANALYTICAL RESULTS FOR SOIL SAMPLING
NEWLAND, NORTH CAROLINA NOVEMBER 2012

Sample ID:	NCDENR Remediation Goals Migration to Groundwater	NCDENR Maximum Concentration	Preliminary Residential Health - Based Soil Remediation Goal (PSRG) UG/KG	Protection of Groundwater (PSRG) UG/KG	P-6 4-6'	P-6 6-8'	P-6 8-10'	P-7 0-2'	P-7 2-4'	P-7 4-6'	P-7 6-8'	P-7 8-10'	P-8 4-6'	P-8 6-8'	P-8 8-10'	P-9 0-2'
Lab Sample ID:					NB16042-026	NB16042-027	NB16042-028	NB16042-029	NB16042-030	NB16042-031	NB16042-032	NB16042-033	NB16042-034	NB16042-035	NB16042-036	NB16042-037
Collection Date:					2/13/2012	2/13/2012	2/13/2012	2/13/2012	2/13/2012	2/13/2012	2/13/2012	2/13/2012	2/13/2012	2/13/2012	2/13/2012	2/13/2012
Receipt Date:					2/16/2012	2/16/2012	2/16/2012	2/16/2012	2/16/2012	2/16/2012	2/16/2012	2/16/2012	2/16/2012	2/16/2012	2/16/2012	2/16/2012
Matrix:					SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Units of Measure:					ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Dilution:					1	1	1	1	10	1	1	1	1	1	1	1
Compound Description					Results	Results	Results	Results	Results	Results	Results	Results	Results	Results	Results	Results
Aldrin			29	3.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
beta-BHC			270	1.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
alpha-BHC			77	0.36	ND	ND	ND	ND	ND	ND	ND	ND	3.3	ND	ND	1800
delta-BHC			120,000	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
gamma-BHC (Lindane)			520	1.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4,4'-DDD	240		2000	240	53	ND	ND	ND	ND	ND	ND	ND	5	ND	ND	ND
4,4'-DDE	240		1400	240	77	ND	ND	9	150	ND	ND	ND	2.8	ND	ND	ND
4,4'-DDT	340	1200	1700	340	80	ND	ND	13	180	ND	ND	ND	16	ND	ND	ND
Dieldrin	0.8		30	0.81	65	ND	ND	2.4	89	ND	ND	ND	2.7	ND	ND	ND
Endosulfan I			74,000	5600	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endosulfan II			74,000	5600	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endosulfan sulfate			NA	8000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endrin	3600		3600	810	6.9	ND	ND	ND	ND	ND	ND	ND	4.1	ND	ND	ND
Endrin Aldehyde					24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor	110		110	6.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor Epoxide	53		53	0.82	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methoxchlor			62,000	22,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toxaphene			440	46	550	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	600
Endrin Ketone					6.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
gamma-Chlordane	1600		1600	68	3.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
alpha-Chlordane	1600		1600	68	4.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Sample ID:	NCDENR Remediation Goals Migration to Groundwater	Preliminary Residential Health - Based Soil Remediation Goal (PSRG) UG/KG	Protection of Groundwater (PSRG) UG/KG	TP-21-0-2'	TP-21-2-4'	TP-21-4-6'	TP-21-6-8'	TP-21-8-10'	TP-22-0-2'	TP-22-2-4'	TP-22-4-6'	TP-22-6-8'	TP-22-8-10'	TP-23-0-2'	TP-23-2-4'
Lab Sample ID:				NG20016-016	NG20016-017	NG20016-018	NG20016-019	NG20016-020	NG20016-021	NG20016-022	NG20016-023	NG20016-024	NG20016-025	NG20016-026	NG20016-027
Collection Date:				7/17/2012	7/17/2012	7/17/2012	7/17/2012	7/17/2012	7/17/2012	7/17/2012	7/17/2012	7/17/2012	7/17/2012	7/17/2012	7/17/2012
Receipt Date:				7/20/2012	7/20/2012	7/20/2012	7/20/2012	7/20/2012	7/20/2012	7/20/2012	7/20/2012	7/20/2012	7/20/2012	7/20/2012	7/20/2012
Matrix:				SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Units of Measure:				ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Dilution:				1	1	1	1	1	1	1	1	1	1	1	1
Compound Description				Results	Results	Results	Results	Results	Results	Results	Results	Results	Results	Results	Results
Aldrin			29	3.3	ND	ND	ND	ND	ND	ND	ND	8.2	ND	ND	ND
beta-BHC			270	1.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
alpha-BHC			77	0.36	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
delta-BHC			120,000	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
gamma-BHC (Lindane)			520	1.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4,4'-DDD			2000	240	ND	ND	3.2	ND	ND	39	ND	36	ND	ND	ND
4,4'-DDE	1700		1400	240	44	ND	5.3	ND	ND	83	ND	48	ND	24	ND
4,4'-DDT	1360		1700	340	830	ND	69	ND	ND	410	ND	410	ND	28	ND
Dieldrin	1.13		30	0.81	49	ND	4.3	ND	ND	85	9.3	81	ND	4.4	ND
Endosulfan I			74,000	5600	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endosulfan II			74,000	5600	27	ND	ND	ND	ND	63	ND	18	ND	ND	ND
Endosulfan sulfate			NA	8000	69	ND	ND	ND	ND	29	ND	18	ND	ND	ND
Endrin	3600		3600	810	79	ND	3.9	ND	ND	32	ND	25	ND	ND	ND
Endrin Aldehyde					ND	ND	ND	ND	ND	75	ND	57	ND	ND	ND
Heptachlor	110		110	6.6	ND	ND	ND	ND	ND	6.9	ND	10	ND	ND	ND
Heptachlor Epoxide	53		53	0.82	6.1	ND	ND	ND	ND	6.3	ND	ND	ND	ND	ND
Methoxchlor			62,000	22,000	73	ND	ND	ND	ND	96	ND	39	ND	ND	ND
Toxaphene			440	46	ND	ND	ND	ND	ND	2500	ND	1600	ND	ND	ND
Endrin Ketone					71	ND	ND	ND	ND	12	ND	10	ND	ND	ND
gamma-Chlordane	1600		1600	68	20	ND	ND	ND	ND	30	ND	22	ND	ND	ND
alpha-Chlordane	1600		1600	68	16	ND	ND	ND	ND	26	ND	18	ND	ND	ND

BOLD NUMBERS NOTE AN EXCEEDANCE OF RESIDENTIAL HEALTH BASED SOIL REMEDIATION GOAL (PSRG)
SHADED NUMBERS NOTE EXCEEDANCES OF BOTH PSRG AND GROUNDWATER PROTECTION

TABLE 1
SUMMARY OF ANALYTICAL RESULTS FOR SOIL SAMPLING
NEWLAND, NORTH CAROLINA NOVEMBER 2012

Sample ID:	NCDENR Remediation Goals Migration to Groundwater	NCDENR Maximum Concentration	Preliminary Residential Health - Based Soil Remediation Goal (PSRG) UG/KG	Protection of Groundwater (PSRG) UG/KG	P-9 2-4'	P-9 4-6'	P-9 6-8'	P-10 0-2'	P-10 2-4'	P-11 0-2'	P-11 2-4'	P-12 0-2'	P-12 2-4'	P-12 4-6'	P-12 6-8'	P-12 8-10'
Lab Sample ID:					NB16042-038	NB16042-039	NB16042-040	NB16042-042	NB16042-043	NB16042-046	NB16042-047	NB16042-050	NB16042-051	NB16042-052	NB16042-053	NB16042-054
Collection Date:					2/13/2012	2/13/2012	2/13/2012	2/13/2012	2/13/2012	2/13/2012	2/13/2012	2/13/2012	2/13/2012	2/13/2012	2/13/2012	2/13/2012
Receipt Date:					2/16/2012	2/16/2012	2/16/2012	2/16/2012	2/16/2012	2/16/2012	2/16/2012	2/16/2012	2/16/2012	2/16/2012	2/16/2012	2/16/2012
Matrix:					SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Units of Measure:					ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Dilution:					1	1	1	1	1	10	1	10	1	1	1	1
Compound Description					Results	Results	Results	Results	Results	Results	Results	Results	Results	Results	Results	Results
Aldrin			29	3.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
beta-BHC			270	1.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
alpha-BHC			77	0.36	6.3	260	ND	59	ND	150	ND	ND	12	ND	ND	ND
delta-BHC			120,000	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
gamma-BHC (Lindane)			520	1.8	ND	ND	ND	ND	ND	49	ND	ND	10	ND	ND	ND
4,4'-DDD	240		2000	240	ND	ND	ND	52	ND	22	ND	240	27	ND	ND	ND
4,4'-DDE	240		1400	240	ND	ND	ND	44	ND	44	ND	87	13	ND	ND	ND
4,4'-DDT	340	1200	1700	340	ND	ND	ND	65	ND	160	ND	330	16	ND	ND	ND
Dieldrin	0.8		30	0.81	ND	ND	ND	49	ND	30	ND	230	10	ND	ND	ND
Endosulfan I			74,000	5600	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endosulfan II			74,000	5600	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endosulfan sulfate			NA	8000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endrin	3600		3600	810	ND	ND	ND	12	ND	ND	ND	ND	ND	ND	ND	ND
Endrin Aldehyde					ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor	110		110	6.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor Epoxide	53		53	0.82	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methoxchlor			62,000	22,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toxaphene			440	46	ND	ND	ND	450	ND	1400	ND	3700	ND	ND	ND	ND
Endrin Ketone					ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
gamma-Chlordane	1600		1600	68	ND	ND	ND	ND	ND	ND	ND	40	ND	ND	ND	ND
alpha-Chlordane	1600		1600	68	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Sample ID:	NCDENR Remediation Goals Migration to Groundwater		Preliminary Residential Health - Based Soil Remediation Goal (PSRG) UG/KG	Protection of Groundwater (PSRG) UG/KG	TP-23-4-6'	TP-24-0-2'	TP-24-2-4'	TP-24-4-6'	TP-24-6-8'	TP-24-8-10'	TP-25-0-2'	TP-25-2-4'	TP-25-4-6'	TP-25-6-8'	TP-25-8-10'
Lab Sample ID:					NG20016-038	NG20016-028	NG20016-029	NG20016-030	NG20016-031	NG20016-032	NG20016-033	NG20016-034	NG20016-035	NG20016-036	NG20016-037
Collection Date:					7/17/2012	7/17/2012	7/17/2012	7/17/2012	7/17/2012	7/17/2012	7/17/2012	7/17/2012	7/17/2012	7/17/2012	7/17/2012
Receipt Date:					7/20/2012	7/20/2012	7/20/2012	7/20/2012	7/20/2012	7/20/2012	7/20/2012	7/20/2012	7/20/2012	7/20/2012	7/20/2012
Matrix:					SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Units of Measure:					ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Dilution:					1	1	1	1	1	1	1	1	1	1	1
Compound Description								Results	Results	Results	Results	Results	Results	Results	Results
Aldrin			29	3.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
beta-BHC			270	1.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
alpha-BHC			77	0.36	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
delta-BHC			120,000	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
gamma-BHC (Lindane)			520	1.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4,4'-DDD			2000	240	ND	2.5	40	ND	ND	ND	ND	ND	ND	ND	ND
4,4'-DDE	1700		1400	240	ND	26	36	ND	ND	ND	3	2.2	ND	ND	ND
4,4'-DDT	1360		1700	340	ND	44	32	3.8	ND	ND	4.6	4	ND	ND	ND
Dieldrin	1.13		30	0.81	ND	9.7	19	ND	ND	ND	9.7	4.9	ND	ND	ND
Endosulfan I			74,000	5600	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endosulfan II			74,000	5600	ND	ND	2.8	ND	ND	ND	ND	ND	ND	ND	ND
Endosulfan sulfate			NA	8000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endrin	3600		3600	810	ND	ND	2.5	ND	ND	ND	ND	ND	ND	ND	ND
Endrin Aldehyde					ND	6.4	10	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor	110		110	6.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor Epoxide	53		53	0.82	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methoxchlor			62,000	22,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toxaphene			440	46	ND	130	180	ND	ND	ND	ND	ND	ND	ND	ND
Endrin Ketone					ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
gamma-Chlordane	1600		1600	68	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
alpha-Chlordane	1600		1600	68	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

BOLD NUMBERS NOTE AN EXCEEDANCE OF RESIDENTIAL HEALTH BASED SOIL REMEDIATION GOAL (PSRG)
SHADED NUMBERS NOTE EXCEEDANCES OF BOTH PSRG AND GROUNDWATER PROTECTION

TABLE 2
GROUNDWATER SAMPLING RESULTS
1339 NEWLAND HIGHWAY, NEWLAND, NORTH CAROLINA
NOVEMBER 2012

	Sample ID:		15A NCAN 2L	WATER	WELL	WELL	Well	Septic Tank	MW-1	MW-1	MW-2	MW-2	MW-3	MW-4
	Lab Sample ID:		.0202,	490501	706901		NG20017-003		NG20017-001	NH23053-001	NG20017-002	NH23053-002	NH23053-003	NH23053-004
	Collection Date:	15A NCAC 2L	Interim	11/4/2004	7/6/2005	7/20/2011	7/18/2012	7/20/2011	7/18/2012	8/22/2012	7/18/2012	8/22/2012	8/22/2012	8/22/2012
	Receipt Date:	.0202	Maximum	11/5/2004	7/7/2005	7/21/2011	7/20/2012	7/21/2011	7/20/2012	8/23/2012	7/20/2012	8/23/2012	8/23/2012	8/23/2012
	Matrix:	Groundwater	Allowable	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER
	Units of Measure:	Standards ug/L	Concentrations	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
	Dilution:		(IMAC)		1	1	1	1	1	1	1	1	1	1
	Compound Description		ug/L	Result	Result	Result	Results	Result	Results	Results	Results	Results	Results	Results
CAS	309-00-2	Aldrin	0.002	NT	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	319-85-7	beta-BHC	0.02	0.07	0.053	ND	ND	0.28	ND	ND	0.12	0.13	0.086	ND
	319-84-6	alpha-BHC	0.02	0.08	0.065	ND	ND	0.26	ND	ND	0.09	0.097	ND	ND
	319-86-8	delta-BHC	0.02	0.05	0.066	ND	ND	ND	ND	ND	0.14	0.11	ND	ND
	58-89-9	gamma-BHC (Lindane)	0.03	0.03	0.011	ND	ND	0.041	ND	ND	0.031	0.037	ND	ND
		BHC Technical Grade**	0.02	0.23	0.195	ND	ND	0.581	ND	ND	0.381	0.374	0.086	ND
	72-54-8	4,4'-DDD	0.1	NT	ND	ND	ND	ND	ND	ND	0.084	0.075	0.1	ND
	72-55-9	4,4'-DDE	0.1	ND	ND	ND	ND	0.041	ND	ND	0.071	0.084	0.16	ND
	50-29-3	4,4'-DDT	0.1	ND	ND	ND	ND	0.11	ND	ND	ND	0.074	ND	ND
	60-57-1	Dieldrin	0.002	0.19	0.15	0.074	0.069	0.46	ND	ND	0.15	0.17	0.25	0.028
	959-98-8	Endosulfan I	40	NT	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	13-65-9	Endosulfan II	40	0.03	0.013	ND	ND	ND	ND	ND	0.093	0.068	0.15	ND
		Total Endosulfan Isomers	40	0.03	0.013	ND	ND	ND	ND	ND	0.093	0.068	0.15	ND
	1031-07-8	Endosulfan sulfate	40	40	NT	ND	ND	ND	ND	ND	0.14	0.11	0.13	ND
	72-20-8	Endrin*	2 total*	0.05	0.04	0	0	0.22	0	0	0.078	0.071	0.11	0
	7421-93-4	Endrin Aldehyde*	2 total	0	0	0	0	0	0	0	0.22	0.12	0.19	0
		Total Endrin Isomers	2	0.2	0.13	0.05	0.039	0.45	0	0	0.355	0.258	0.44	0
	76-44-8	Heptachlor	0.008	0.11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	1024-57-3	Heptachlor Epoxide	0.004	ND	0.033	ND	ND	ND	ND	ND	ND	ND	0.05	ND
	72-43-5	Methoxchlor	40	NT	ND	ND	ND	ND	ND	ND	ND	ND	0.15	ND
	8001-35-2	Toxaphene	0.03	NT	ND	ND	ND	ND	ND	ND	6	6.8	7.8	0.64
	53494-70-5	Endrin Ketone*	2 total	0.15	0.09	0.05	0.039	0.23	0	0	0.057	0.067	0.14	0
	5103-74-2	gamma-Chlordane	0.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	5103-71-9	alpha-Chlordane	0.1	0.02	ND	ND	ND	ND	ND	ND	ND	ND	0.054	ND
		Total Chlordane	0.1	0.02	ND	ND	ND	ND	ND	ND	ND	ND	0.054	ND
		pH								5.17		4.69	5.16	4.72
		Dissolved Oxygen								4.47		4.36	3.88	ND
		Total Endrin Compounds*	Total 2	0.2	0.13	0.05	0.039	0.45	0	0	0.355	0.258	0.44	0

total* - Notes the Endrin Compounds which cannot exceed a total of 2 ug/L. "0" was used in lieu of ND for calculations

Bold Items note an exceedance of Groundwater Quality Standards

FIGURES



VEC

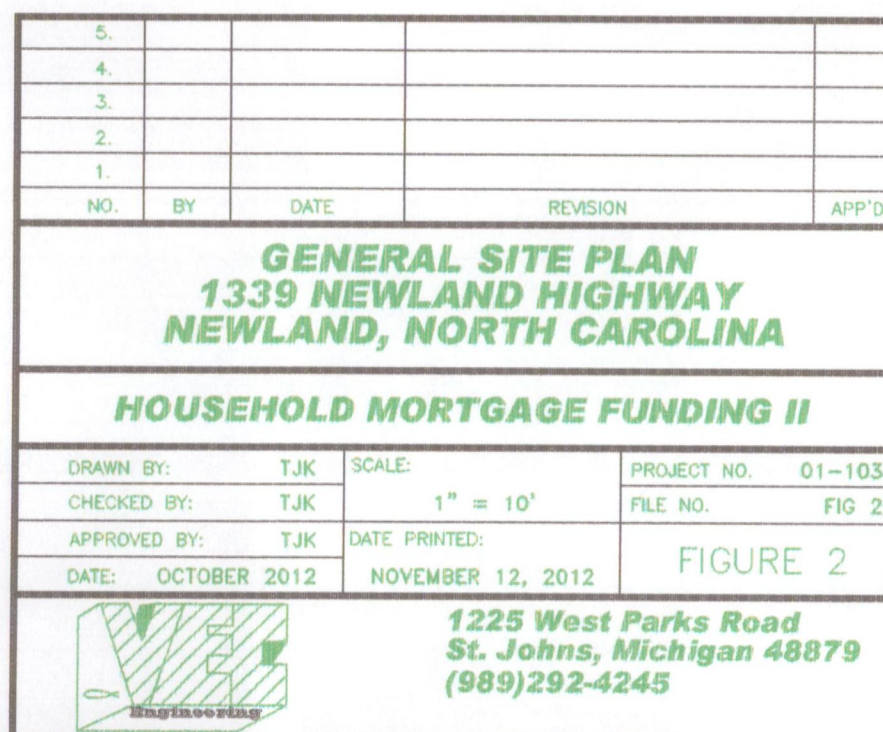
Engineering

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Saint Johns, Michigan
Phone (989)292-4245

SITE LOCATION
1339 NEWLAND HIGHWAY

AVERY COUNTY
NEWLAND, NORTH CAROLINA

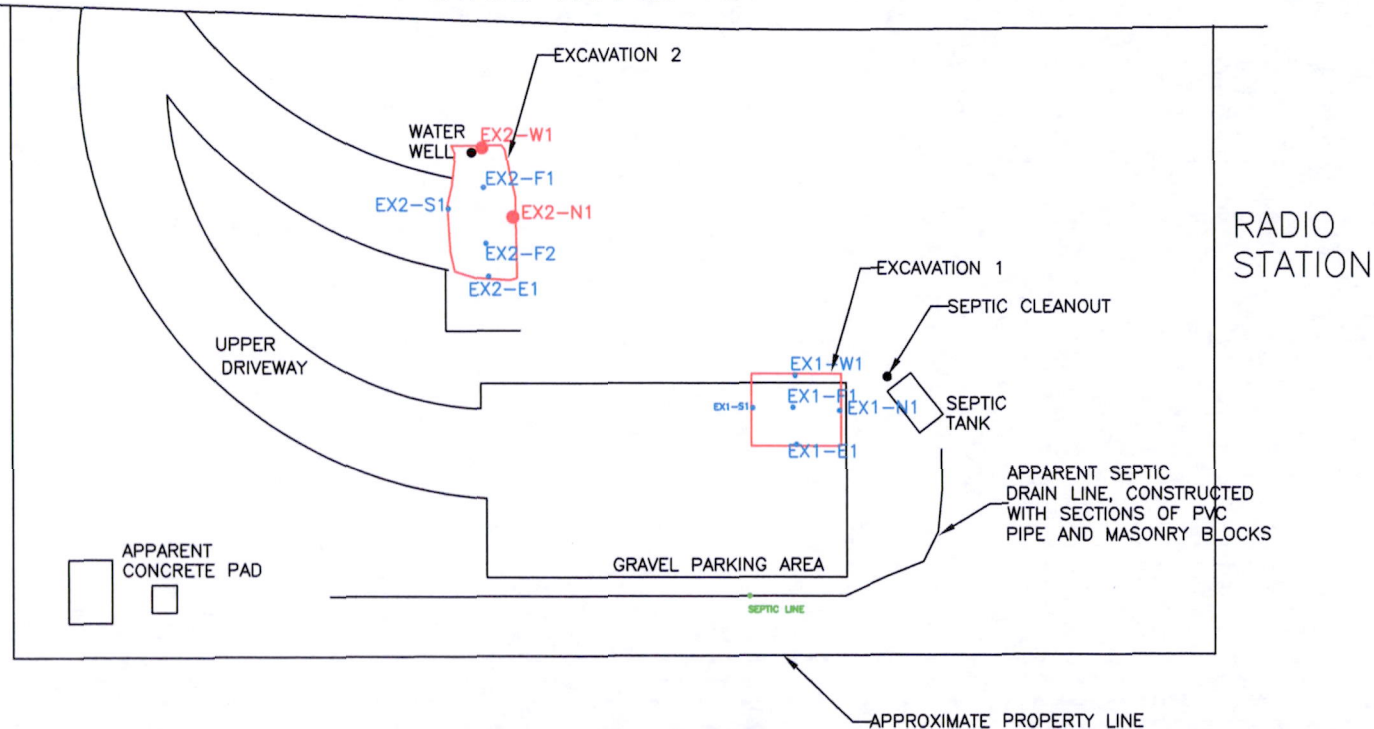
SIZE	FSCM NO.	DWG NO.	REV
SCALE NTS			FIGURE 1



- DENOTES EXCEEDS NCDNER MIGRATION TO GROUNDWATER CLEANUP CRITERIA
- DENOTES LARGE EXCEEDANCE OF BOTH DIRECT CONTACT AND MIGRATION TO GROUNDWATER NCDNER CLEANUP CRITERIA
- DENOTES SAMPLE BELOW CLEANUP CRITERIA



NEWLAND HIGHWAY
STATE ROUTE 181



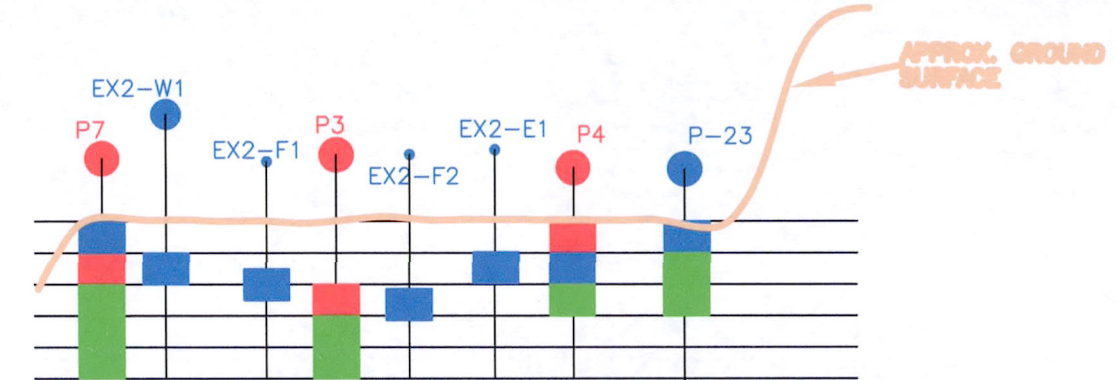
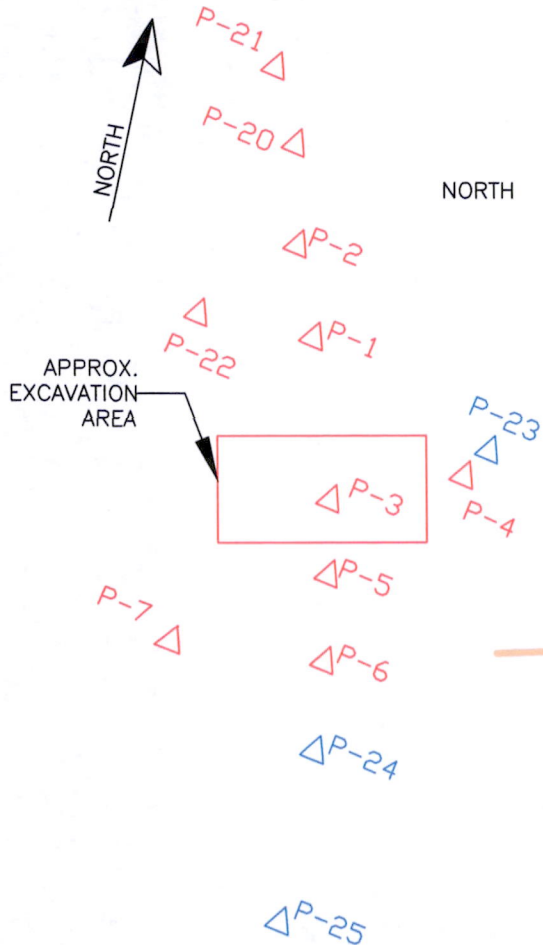
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Phone (989)292-4245

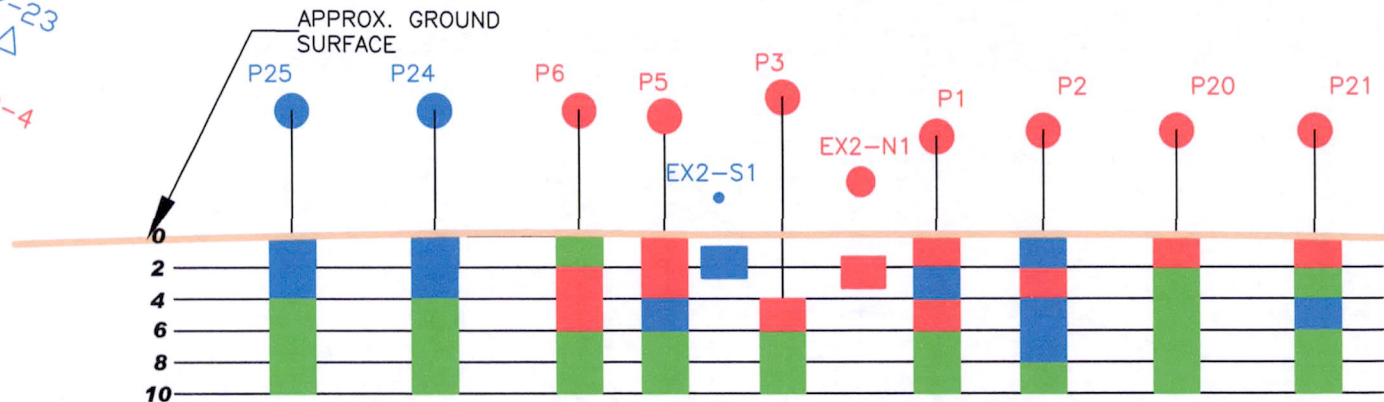
REMEDIAL EXCAVATIONS 2011
1339 NEWLAND HIGHWAY

AVERY COUNTY
NEWLAND, NORTH CAROLINA

SIZE	FSCM NO.	DWG NO.	REV
SCALE NTS			FIGURE 3



GENERAL WEST-EAST CROSS SECTION



GENERAL SOUTH-NORTH CROSS SECTION

PLAN VIEW SOIL SAMPLING LOCATIONS EXCAVATION 2

- DENOTES SAMPLE THAT EXCEEDS BOTH PSRG-GW AND PSRG - RESIDENTIAL
- DENOTES SAMPLE THAT EXCEEDS PSRG-GW ONLY
- DENOTES SAMPLE THAT DOES NOT EXCEED CRITERIA

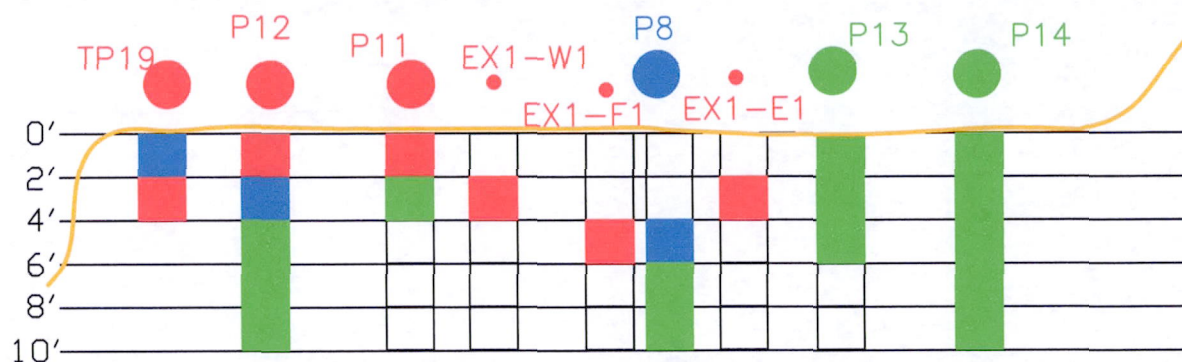
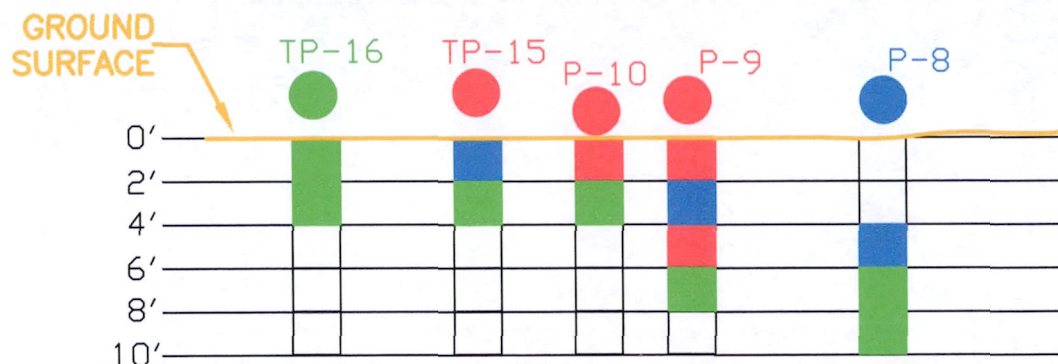
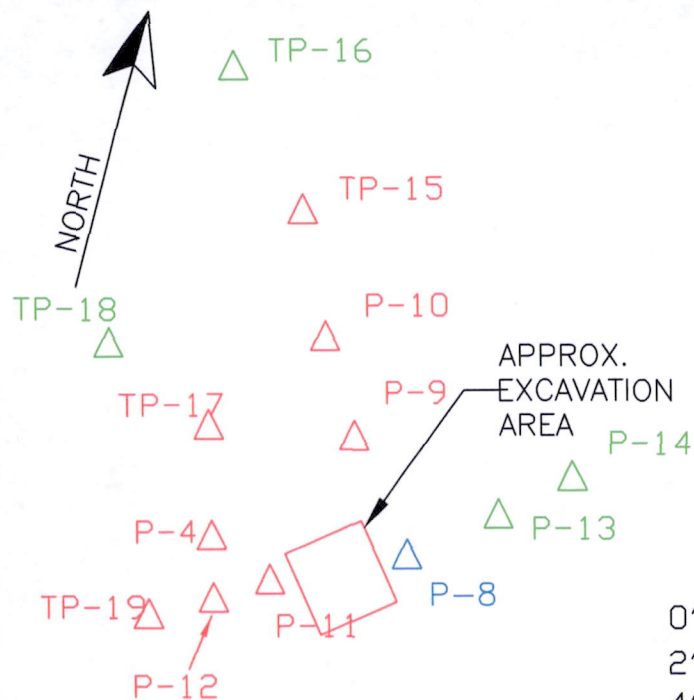
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PLLC

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**2012 SOIL SAMPLING FOR EXCAVATION 2
1339 NEWLAND HIGHWAY**

**AVERY COUNTY
NEWLAND, NORTH CAROLINA**

SIZE	FSCM NO.	DWG NO.	REV
SCALE NTS			FIGURE 4



■ DENOTES SAMPLE THAT EXCEEDS BOTH
PSRG-GW AND PSRG RESIDENTIAL

■ DENOTES SAMPLE THAT
EXCEEDS PSRG-GW ONLY

■ DENOTES SAMPLE THAT DOES
NOT EXCEED CRITERIA

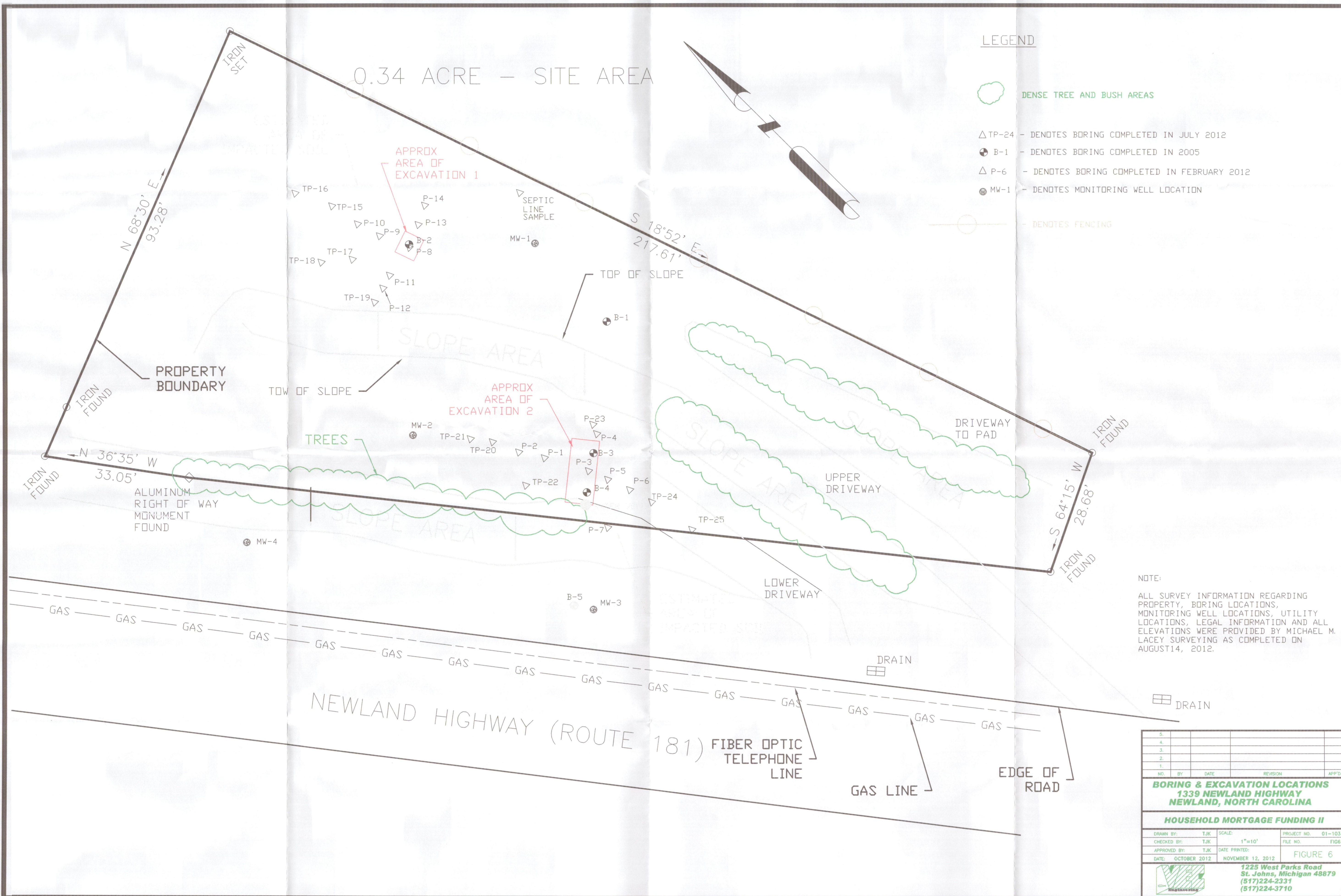
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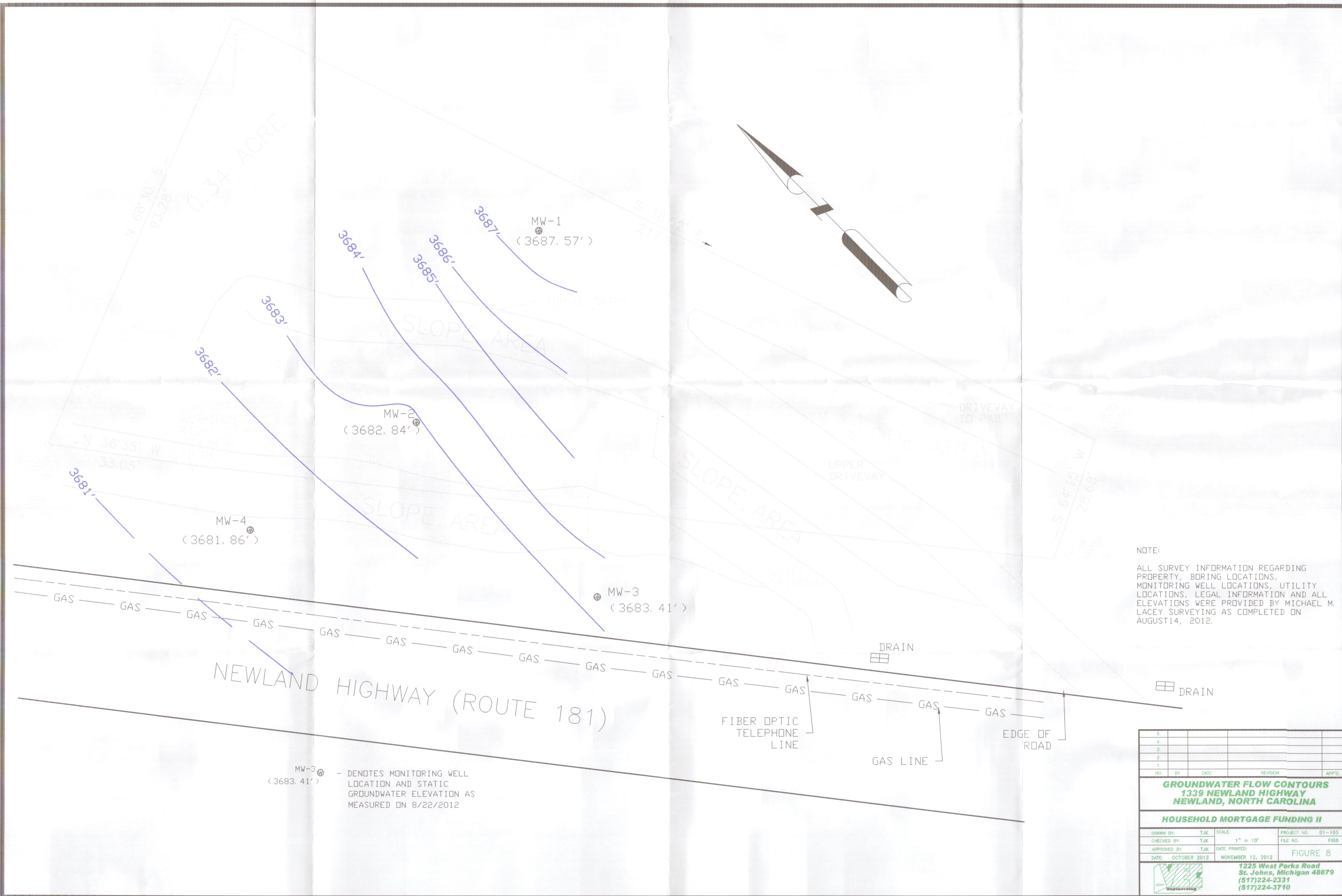
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2012 SOIL SAMPLING NEAR EXCAVATION 1
1339 NEWLAND HIGHWAY

AVERY COUNTY
NEWLAND, NORTH CAROLINA

SIZE	FSCM NO.	DWG NO.	REV
SCALE NTS			FIGURE 5





NOTE:
ALL SURVEY INFORMATION REGARDING
PROPERTY, BORING LOCATIONS,
MONITORING WELL LOCATIONS, UTILITY
LOCATIONS, LEGAL INFORMATION AND ALL
ELEVATIONS WERE PROVIDED BY MICHAEL M.
LACEY SURVEYING AS COMPLETED ON
AUGUST14, 2012.


MW-3 (3683.41') - DENOTES MONITORING WELL
LOCATION AND STATIC
GROUNDWATER ELEVATION AS
MEASURED ON 8/22/2012

5.					
4.					
3.					
2.					
1.					
NO.	BY	DATE	REVISION	APP'D.	

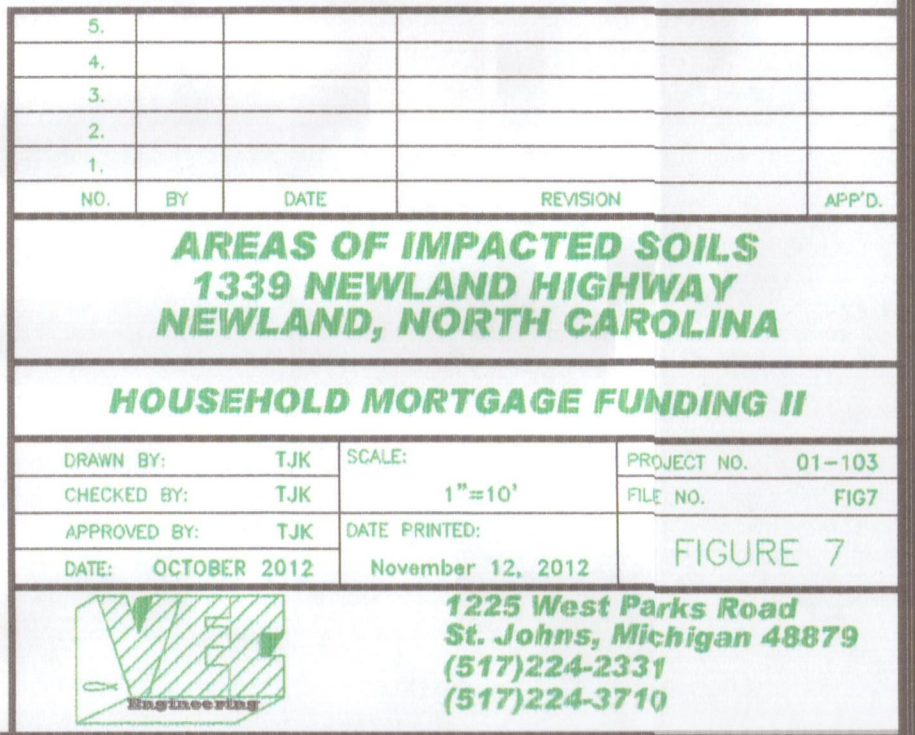
GROUNDWATER FLOW CONTOURS
1339 NEWLAND HIGHWAY
NEWLAND, NORTH CAROLINA

HOUSEHOLD MORTGAGE FUNDING II

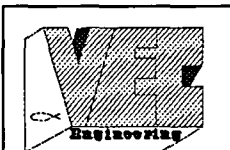
DRAWN BY:	TJK	SCALE:	1" = 10'	PROJECT NO.	01-103
CHECKED BY:	TJK	DATE PRINTED:	NOVEMBER 12, 2012	FILE NO.	FIG8
APPROVED BY:	TJK				FIGURE 8
DATE:	OCTOBER 2012				



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(517)224-2331
(517)224-3710



BORING LOGS

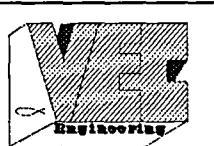


LOG OF TEST BORING

Project Name:	Newland, North Carolina	Boring No.:	P-1
Location:	Newland, North Carolina	Sheet No.:	1 OF 1
Contractor:	Mad Dawg Drilling	Date:	2/13/2012
Drilling Method:	Geoprobe	Surface Elev.:	
		Borehole Dia.:	

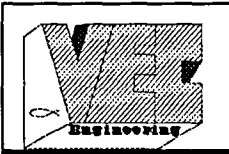
Sampling Notes					Visual Classification and General Observations
Intervals		Blow Cnt.	Recovery	Moisture	
No.	Type	(N)	(in)		
					Grey Silty Clay, Little Sand, Trace Gravel, Moist (CL)
					Brown Sand Seam, Moist (SP)
					Grey Weathered Siltstone, Moist (SM)
					EOB 10'

General Notes		Water Level Observations	
Date Started	2/13/2012	While Drilling	Water not observed
Date Completed	2/13/2012	At Completion	NA
Rig	Geoprobe	After Drilling	NA
Crew Chief		Cave-In: Date/Time	Depth
Logged	Checked	Water: Date/Time	Depth



LOG OF TEST BORING

Project Name:		Newland, North Carolina			Boring No.:		P-2	
Location:		Newland, North Carolina			Sheet No.:		1 OF 1	
Contractor:		Mad Dawg Drilling			Date:		2/13/2012	
Drilling Method:		Geoprobe			Surface Elev.:			
					Borehole Dia.:			
Sampling Notes					Visual Classification and General Observations			
Intervals		Blow Cnt.	Recovery	Moisture				
No.	Type	(N)	(in)		Depth			
					1	Brown to Grey Silty Clay, Little Sand, Trace Gravel, Moist (CL)		
					2			
					3			
					4			
					5			
					6			
					7			
					8	Grey Weathered Siltstone, Moist (SM)		
					9			
					10	EOB 10'		
					11			
					12			
					13			
					14			
					15			
					16			
					17			
					18			
					19			
					20			
					21			
					22			
					23			
					24			
					25			
General Notes					Water Level Observations			
Date Started 2/13/2012					While Drilling Water not observed			
Date Completed 2/13/2012					At Completion NA			
Rig Geoprobe					After Drilling NA			
Crew Chief					Cave-In: Date/Time Depth			
Logged Checked					Water: Date/Time Depth			

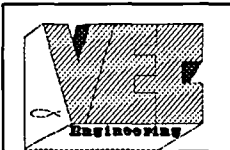


LOG OF TEST BORING

Project Name:		Newland, North Carolina			Boring No.:		P-3	
Location:		Newland, North Carolina			Sheet No.:		1 OF 1	
Contractor:		Mad Dawg Drilling			Date:		2/13/2012	
Drilling Method:		Geoprobe			Surface Elev.:			
					Borehole Dia.:			

Sampling Notes					Depth	Visual Classification and General Observations
Intervals		Blow Cnt. (N)	Recovery (in)	Moisture		
No.	Type					
					1	Sand Fill
					2	
					3	
					4	
					5	Brown to Grey Silty Clay, Little Sand, Trace Gravel, Moist (CL)
					6	
					7	
					8	
					9	Grey Weathered Siltstone, Moist (SM)
					10	
					11	EOB 12'
					12	
					13	
					14	
					15	
					16	
					17	
					18	
					19	
					20	
					21	
					22	
					23	
					24	
					25	

General Notes				Water Level Observations			
Date Started		2/13/2012		While Drilling		Water not observed	
Date Completed		2/13/2012		At Completion		NA	
Rig		Geoprobe		After Drilling		NA	
Crew Chief				Cave-In: Date/Time		Depth	
Logged		Checked		Water: Date/Time		Depth	

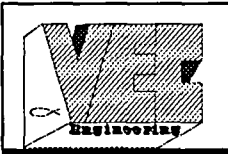


LOG OF TEST BORING

Project Name:		Newland, North Carolina			Boring No.:		P-4	
Location:		Newland, North Carolina			Sheet No.:		1 OF 1	
Contractor:		Mad Dawg Drilling			Date:		2/13/2012	
Drilling Method:		Geoprobe			Surface Elev.:			
					Borehole Dia.:			

Sampling Notes					Depth	Visual Classification and General Observations
Intervals		Blow Cnt.	Recovery	Moisture		
No.	Type	(N)	(in)			
					1	Brown to Grey Silty Clay, Little Sand, Trace Gravel, Moist (CL)
					2	
					3	
					4	
					5	
					6	Grey Weathered Siltstone, Moist (SM)
					7	
					8	
					9	
					10	
					11	EOB 10'
					12	
					13	
					14	
					15	
					16	
					17	
					18	
					19	
					20	
					21	
					22	
					23	
					24	
					25	

General Notes				Water Level Observations			
Date Started		2/13/2012		While Drilling		Water not observed	
Date Completed		2/13/2012		At Completion		NA	
Rig		Geoprobe		After Drilling		NA	
Crew Chief				Cave-In: Date/Time		Depth	
Logged		Checked		Water: Date/Time		Depth	

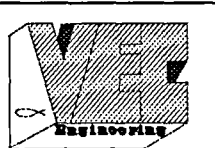


LOG OF TEST BORING

Project Name:		Newland, North Carolina			Boring No.:		P-5	
Location:		Newland, North Carolina			Sheet No.:		1 OF 1	
Contractor:		Mad Dawg Drilling			Date:		2/13/2012	
Drilling Method:		Geoprobe			Surface Elev.:			
					Borehole Dia.:			

Sampling Notes					Depth	Visual Classification and General Observations
Intervals		Blow Cnt.	Recovery	Moisture		
No.	Type	(N)	(in)			
					1	Fill - Sand and gravel, Moist
					2	
					3	
					4	
					5	
					6	Brown to Grey Silty Clay, Little Sand, Trace Gravel, Moist (CL)
					7	
					8	
					9	
					10	
					11	Grey Weathered Siltstone, Moist (SM)
					12	
					13	
					14	
					15	
					16	
					17	
					18	
					19	
					20	
					21	
					22	
					23	
					24	
					25	

General Notes				Water Level Observations			
Date Started		2/13/2012		While Drilling		Water not observed	
Date Completed		2/13/2012		At Completion		NA	
Rig		Geoprobe		After Drilling		NA	
Crew Chief				Cave-In: Date/Time		Depth	
Logged		Checked		Water: Date/Time		Depth	

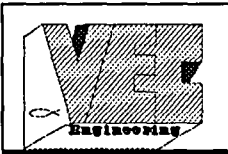


LOG OF TEST BORING

Project Name:		Newland, North Carolina			Boring No.:		P-6	
Location:		Newland, North Carolina			Sheet No.:		1 OF 1	
Contractor:		Mad Dawg Drilling			Date:		2/13/2012	
Drilling Method:		Geoprobe			Surface Elev.:			
					Borehole Dia.:			
Sampling Notes					Depth	Visual Classification and General Observations		
Intervals		Blow Cnt.	Recovery	Moisture				
No.	Type	(N)	(in)					
					1	Fill - Sand and gravel, Moist		
					2	Brown to Grey Silty Clay, Little Sand, Trace Gravel, Moist (CL)		
					3			
					4			
					5			
					6			
					7			
					8			
					9	Grey Weathered Siltstone, Moist (SM)		
					10	EOB 10'		
					11			
					12			
					13			
					14			
					15			
					16			
					17			
					18			
					19			
					20			
					21			
					22			
					23			
					24			
					25			
General Notes					Water Level Observations			
Date Started 2/13/2012					While Drilling Water not observed			
Date Completed 2/13/2012					At Completion NA			
Rig Geoprobe					After Drilling NA			
Crew Chief					Cave-In: Date/Time Depth			
Logged Checked					Water: Date/Time Depth			

VEC Engineering

1225 West Parks Road
Saint Johns, Michigan 48879

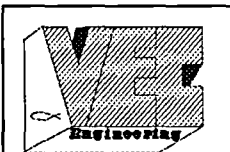


LOG OF TEST BORING

Project Name:		Newland, North Carolina			Boring No.:		P-7	
Location:		Newland, North Carolina			Sheet No.:		1 OF 1	
Contractor:		Mad Dawg Drilling			Date:		2/13/2012	
Drilling Method:		Geoprobe			Surface Elev.:			
					Borehole Dia.:			

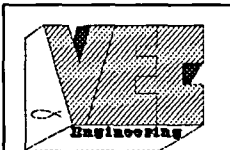
Sampling Notes					Depth	Visual Classification and General Observations
Intervals		Blow Cnt. (N)	Recovery (in)	Moisture		
No.	Type					
					1	Brown to Grey Silty Clay, Little Sand, Trace Gravel, Moist (CL)
					2	
					3	
					4	
					5	
					6	
					7	
					8	Grey Weathered Siltstone, Moist (SM)
					9	
					10	EOB 10'
					11	
					12	
					13	
					14	
					15	
					16	
					17	
					18	
					19	
					20	
					21	
					22	
					23	
					24	
					25	

General Notes				Water Level Observations			
Date Started		2/13/2012		While Drilling		Water not observed	
Date Completed		2/13/2012		At Completion		NA	
Rig		Geoprobe		After Drilling		NA	
Crew Chief				Cave-In: Date/Time		Depth	
Logged		Checked		Water: Date/Time		Depth	



LOG OF TEST BORING

Project Name:		Newland, North Carolina			Boring No.:		P-8	
Location:		Newland, North Carolina			Sheet No.:		1 OF 1	
Contractor:		Mad Dawg Drilling			Date:		2/13/2012	
Drilling Method:		Geoprobe			Surface Elev.:			
					Borehole Dia.:			
Sampling Notes					Visual Classification and General Observations			
Intervals		Blow Cnt.	Recovery	Moisture				
No.	Type	(N)	(in)		Depth			
					1	Sand Fill		
					2			
					3			
					4			
					5	Brown to Grey Silty Clay, Little Sand, Trace Gravel, Moist (CL)		
					6			
					7			
					8			
					9	Grey Weathered Siltstone, Moist (SM)		
					10			
					11	EOB 10'		
					12			
					13			
					14			
					15			
					16			
					17			
					18			
					19			
					20			
					21			
					22			
					23			
					24			
					25			
General Notes					Water Level Observations			
Date Started 2/13/2012					While Drilling Water not observed			
Date Completed 2/13/2012					At Completion NA			
Rig Geoprobe					After Drilling NA			
Crew Chief					Cave-In: Date/Time Depth			
Logged Checked					Water: Date/Time Depth			



LOG OF TEST BORING

Project Name:	Newland, North Carolina	Boring No.:	P-9
Location:	Newland, North Carolina	Sheet No.:	1 OF 1
Contractor:	Mad Dawg Drilling	Date:	2/13/2012
Drilling Method:	Geoprobe	Surface Elev.:	
		Borehole Dia.:	

Sampling Notes					Depth	Visual Classification and General Observations
Intervals		Blow Cnt. (N)	Recovery (in)	Moisture		
No.	Type					
					1	Brown to Grey Silty Clay, Little Sand, Trace Gravel, Moist (CL)
					2	
					3	
					4	
					5	
					6	Grey Weathered Siltstone, Moist (SM)
					7	
					8	
					9	
					10	
					11	EOB 10'
					12	
					13	
					14	
					15	
					16	
					17	
					18	
					19	
					20	
					21	
					22	
					23	
					24	
					25	

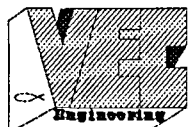
General Notes		Water Level Observations	
Date Started	2/13/2012	While Drilling	Water not observed
Date Completed	2/13/2012	At Completion	NA
Rig	Geoprobe	After Drilling	NA
Crew Chief		Cave-In: Date/Time	Depth
Logged	Checked	Water: Date/Time	Depth

LOG OF TEST BORING

Project Name:		Newland, North Carolina			Boring No.:		P-10	
Location:		Newland, North Carolina			Sheet No.:		1 OF 1	
Contractor:		Mad Dawg Drilling			Date:		2/13/2012	
Drilling Method:		Geoprobe			Surface Elev.:			
					Borehole Dia.:			

Sampling Notes					Depth	Visual Classification and General Observations
Intervals		Blow Cnt. (N)	Recovery (in)	Moisture		
No.	Type					
					1	Brown to Grey Silty Clay, Little Sand, Trace Gravel, Moist (CL)
					2	
					3	
					4	
					5	
					6	Grey Weathered Siltstone, Moist (SM)
					7	
					8	
					9	
					10	EOB - 10'
					11	
					12	
					13	
					14	
					15	
					16	
					17	
					18	
					19	
					20	
					21	
					22	
					23	
					24	
					25	

General Notes			Water Level Observations		
Date Started	2/13/2012		While Drilling	Water not observed	
Date Completed	2/13/2012		At Completion	NA	
Rig	Geoprobe		After Drilling	NA	
Crew Chief			Cave-In: Date/Time	Depth	
Logged	Checked		Water: Date/Time	Depth	

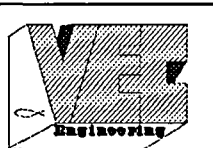


LOG OF TEST BORING

Project Name: Newland, North Carolina Boring No.: P-11
Location: Newland, North Carolina Sheet No.: 1 OF 1
Contractor: Mad Dawg Drilling Date: 2/13/2012
Drilling Method: Geoprobe Surface Elev.:
Borehole Dia.:

Sampling Notes					Depth	Visual Classification and General Observations
Intervals		Blow Cnt. (N)	Recovery (in)	Moisture		
No.	Type					
					1	Fill - Sand and gravel, Moist
					2	Brown to Grey Silty Clay, Little Sand, Trace Gravel, Moist (CL)
					3	
					4	
					5	
					6	
					7	
					8	
					9	
					10	EOB 10'
					11	
					12	
					13	
					14	
					15	
					16	
					17	
					18	
					19	
					20	
					21	
					22	
					23	
					24	
					25	

General Notes			Water Level Observations		
Date Started	<u>2/13/2012</u>	While Drilling	Water not observed		
Date Completed	<u>2/13/2012</u>	At Completion	<u>NA</u>		
Rig	<u>Geoprobe</u>	After Drilling	<u>NA</u>		
Crew Chief	<u></u>	Cave-In: Date/Time	<u></u>	Depth	<u></u>
Logged	<u>Checked</u>	Water: Date/Time	<u></u>	Depth	<u></u>

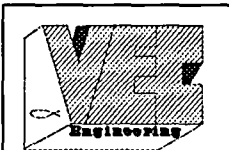


LOG OF TEST BORING

Project Name:		Newland, North Carolina			Boring No.:		P-12	
Location:		Newland, North Carolina			Sheet No.:		1 OF 1	
Contractor:		Mad Dawg Drilling			Date:		2/13/2012	
Drilling Method:		Geoprobe			Surface Elev.:			
					Borehole Dia.:			

Sampling Notes					Depth	Visual Classification and General Observations
Intervals		Blow Cnt.	Recovery	Moisture		
No.	Type	(N)	(in)			
					1	Brown to Grey Silty Clay, Little Sand, Trace Gravel, Moist (CL)
					2	
					3	
					4	
					5	
					6	
					7	
					8	Grey Weathered Siltstone, Moist (SM)
					9	
					10	EOB 10'
					11	
					12	
					13	
					14	
					15	
					16	
					17	
					18	
					19	
					20	
					21	
					22	
					23	
					24	
					25	

General Notes				Water Level Observations			
Date Started		2/13/2012		While Drilling		Water not observed	
Date Completed		2/13/2012		At Completion		NA	
Rig		Geoprobe		After Drilling		NA	
Crew Chief				Cave-In: Date/Time		Depth	
Logged		Checked		Water: Date/Time		Depth	

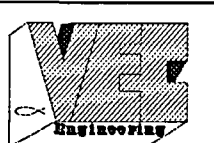


LOG OF TEST BORING

Project Name:		Newland, North Carolina			Boring No.:		P-13	
Location:		Newland, North Carolina			Sheet No.:		1 OF 1	
Contractor:		Mad Dawg Drilling			Date:		2/13/2012	
Drilling Method:		Geoprobe			Surface Elev.:			
					Borehole Dia.:			

Sampling Notes					Depth	Visual Classification and General Observations
Intervals		Blow Cnt. (N)	Recovery (in)	Moisture		
No.	Type					
					1	Fill - Sand and gravel, Moist
					2	
					3	
					4	
					5	Brown to Grey Silty Clay, Little Sand, Trace Gravel, Moist (CL)
					6	
					7	
					8	
					9	Grey Weathered Siltstone, Moist (SM)
					10	
					11	EOB 10'
					12	
					13	
					14	
					15	
					16	
					17	
					18	
					19	
					20	
					21	
					22	
					23	
					24	
					25	

General Notes				Water Level Observations			
Date Started		2/13/2012		While Drilling		Water not observed	
Date Completed		2/13/2012		At Completion		NA	
Rig		Geoprobe		After Drilling		NA	
Crew Chief				Cave-In: Date/Time		Depth	
Logged		Checked		Water: Date/Time		Depth	



LOG OF TEST BORING

Project Name:	Newland, North Carolina	Boring No.:	P-14
Location:	Newland, North Carolina	Sheet No.:	1 OF 1
Contractor:	Mad Dawg Drilling	Date:	2/13/2012
Drilling Method:	Geoprobe	Surface Elev.:	
		Borehole Dia.:	

Sampling Notes					Depth	Visual Classification and General Observations
Intervals		Blow Cnt. (N)	Recovery (in)	Moisture		
No.	Type					
					1	Fill - Sand and gravel, Moist
					2	Brown to Grey Silty Clay, Little Sand, Trace Gravel, Moist (CL)
					3	
					4	
					5	
					6	
					7	Grey Weathered Siltstone, Moist (SM)
					8	
					9	
					10	
					11	
					12	EOB 10'
					13	
					14	
					15	
					16	
					17	
					18	
					19	
					20	
					21	
					22	
					23	
					24	
					25	

General Notes		Water Level Observations	
Date Started	2/13/2012	While Drilling	Water not observed
Date Completed	2/13/2012	At Completion	NA
Rig	Geoprobe	After Drilling	NA
Crew Chief		Cave-In: Date/Time	Depth
Logged	Checked	Water: Date/Time	Depth

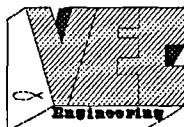


LOG OF TEST BORING

Project Name:	Newland, North Carolina	Boring No.:	P-15
Location:	Newland, North Carolina	Sheet No.:	1 OF 1
Contractor:	Mad Dawg Drilling	Date:	2/13/2012
Drilling Method:	Geoprobe	Surface Elev.:	
		Borehole Dia.:	

Sampling Notes					Depth	Visual Classification and General Observations
Intervals		Blow Cnt.	Recovery	Moisture		
No.	Type	(N)	(in)			
					1	Brown to Grey Silty Clay, Little Sand, Trace Gravel, Moist (CL)
					2	
					3	
					4	
					5	
					6	Grey Weathered Siltstone, Moist (SM)
					7	
					8	
					9	
					10	
					10	EOB - 10'
					11	
					12	
					13	
					14	
					15	
					16	
					17	
					18	
					19	
					20	
					21	
					22	
					23	
					24	
					25	

General Notes			Water Level Observations		
Date Started	2/13/2012	While Drilling	Water not observed		
Date Completed	2/13/2012	At Completion	NA		
Rig	Geoprobe	After Drilling	NA		
Crew Chief		Cave-In: Date/Time	Depth		
Logged	Checked	Water: Date/Time	Depth		



LOG OF TEST BORING

Project Name: <u>Newland, North Carolina</u>	Boring No.: <u>P-16</u>
Location: <u>Newland, North Carolina</u>	Sheet No.: <u>1 OF 1</u>
Contractor: <u>Mad Dawg Drilling</u>	Date: <u>2/13/2012</u>
Drilling Method: <u>Geoprobe</u>	Surface Elev.: _____
	Borehole Dia.: _____

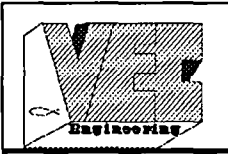
Sampling Notes					Depth	Visual Classification and General Observations
Intervals		Blow Cnt. (N)	Recovery (in)	Moisture		
No.	Type					
					1	Brown to Grey Silty Clay, Little Sand, Trace Gravel, Moist (CL)
					2	
					3	
					4	
					5	
					6	Grey Weathered Siltstone, Moist (SM)
					7	
					8	
					9	
					10	
					11	
					12	
					13	
					14	
					15	
					16	
					17	
					18	
					19	
					20	
					21	
					22	
					23	
					24	
					25	

General Notes Date Started <u>2/13/2012</u> Date Completed <u>2/13/2012</u> Rig <u>Geoprobe</u> Crew Chief _____ Logged <u>Checked</u>	Water Level Observations While Drilling <u>Water not observed</u> At Completion <u>NA</u> After Drilling <u>NA</u> Cave-In: Date/Time _____ Depth _____ Water: Date/Time _____ Depth _____
--	--



LOG OF TEST BORING

Project Name:		Newland, North Carolina			Boring No.:		P-17	
Location:		Newland, North Carolina			Sheet No.:		1 OF 1	
Contractor:		Mad Dawg Drilling			Date:		2/13/2012	
Drilling Method:		Geoprobe			Surface Elev.:			
					Borehole Dia.:			
Sampling Notes					Visual Classification and General Observations			
Intervals		Blow Cnt.	Recovery	Moisture				
No.	Type	(N)	(in)		Depth			
					1	Brown to Grey Silty Clay, Little Sand, Trace Gravel, Moist (CL)		
					2			
					3			
					4			
					5			
					6	Grey Weathered Siltstone, Moist (SM)		
					7			
					8			
					9			
					10			
					11			
					12			
					13			
					14			
					15			
					16			
					17			
					18			
					19			
					20			
					21			
					22			
					23			
					24			
					25			
General Notes					Water Level Observations			
Date Started 2/13/2012					While Drilling Water not observed			
Date Completed 2/13/2012					At Completion NA			
Rig Geoprobe					After Drilling NA			
Crew Chief					Cave-In: Date/Time Depth			
Logged Checked					Water: Date/Time Depth			

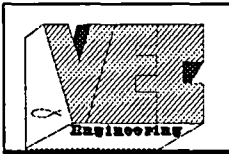


LOG OF TEST BORING

Project Name:	Newland, North Carolina	Boring No.:	P-18
Location:	Newland, North Carolina	Sheet No.:	1 OF 1
Contractor:	Mad Dawg Drilling	Date:	2/13/2012
Drilling Method:	Geoprobe	Surface Elev.:	
		Borehole Dia.:	

Sampling Notes						Visual Classification and General Observations
Intervals		Blow Cnt. (N)	Recovery (in)	Moisture	Depth	
No.	Type					
					1	Brown to Grey Silty Clay, Little Sand, Trace Gravel, Moist (CL)
					2	
					3	
					4	
					5	
					6	Grey Weathered Siltstone, Moist (SM)
					7	
					8	
					9	
					10	
					11	EOB 10'
					12	
					13	
					14	
					15	
					16	
					17	
					18	
					19	
					20	
					21	
					22	
					23	
					24	
					25	

General Notes		Water Level Observations	
Date Started	2/13/2012	While Drilling	Water not observed
Date Completed	2/13/2012	At Completion	NA
Rig	Geoprobe	After Drilling	NA
Crew Chief		Cave-In: Date/Time	Depth
Logged	Checked	Water: Date/Time	Depth

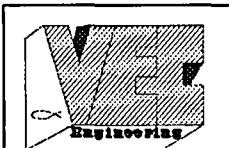


LOG OF TEST BORING

Project Name:	Newland, North Carolina	Boring No.:	P-19
Location:	Newland, North Carolina	Sheet No.:	1 OF 1
Contractor:	Mad Dawg Drilling	Date:	2/13/2012
Drilling Method:	Geoprobe	Surface Elev.:	
		Borehole Dia.:	

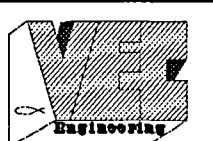
Sampling Notes					Depth	Visual Classification and General Observations
Intervals		Blow Cnt. (N)	Recovery (in)	Moisture		
No.	Type					
					1	Brown to Grey Silty Clay, Little Sand, Trace Gravel, Moist (CL)
					2	
					3	
					4	
					5	
					6	Grey Weathered Siltstone, Moist (SM)
					7	
					8	
					9	
					10	
					11	EOB 10'
					12	
					13	
					14	
					15	
					16	
					17	
					18	
					19	
					20	
					21	
					22	
					23	
					24	
					25	

General Notes Date Started: 2/13/2012 Date Completed: 2/13/2012 Rig: Geoprobe Crew Chief: _____ Logged: _____ Checked: _____		Water Level Observations While Drilling: Water not observed At Completion: NA After Drilling: NA Cave-In: Date/Time _____ Depth _____ Water: Date/Time _____ Depth _____	
--	--	--	--



LOG OF TEST BORING

Project Name:		Newland, North Carolina			Boring No.:		P-20	
Location:		Newland, North Carolina			Sheet No.:		1 OF 1	
Contractor:		Mad Dawg Drilling			Date:		2/13/2012	
Drilling Method:		Geoprobe			Surface Elev.:			
					Borehole Dia.:			
Sampling Notes					Visual Classification and General Observations			
Intervals		Blow Cnt.	Recovery	Moisture				
No.	Type	(N)	(in)		Depth			
					1	Brown to Grey Silty Clay, Little Sand, Trace Gravel, Moist (CL)		
					2			
					3			
					4			
					5			
					6			
					7			
					8	Grey Weathered Siltstone, Moist (SM)		
					9			
					10	EOB - 10'		
					11			
					12			
					13			
					14			
					15			
					16			
					17			
					18			
					19			
					20			
					21			
					22			
					23			
					24			
					25			
General Notes					Water Level Observations			
Date Started 2/13/2012					While Drilling Water not observed			
Date Completed 2/13/2012					At Completion NA			
Rig Geoprobe					After Drilling NA			
Crew Chief					Cave-In: Date/Time Depth			
Logged Checked					Water: Date/Time Depth			

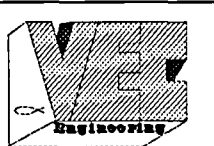


LOG OF TEST BORING

Project Name:		Newland, North Carolina			Boring No.:		P-21	
Location:		Newland, North Carolina			Sheet No.:		1 OF 1	
Contractor:		Mad Dawg Drilling			Date:		2/13/2012	
Drilling Method:		Geoprobe			Surface Elev.:			
					Borehole Dia.:			

Sampling Notes					Depth	Visual Classification and General Observations
Intervals		Blow Cnt. (N)	Recovery (in)	Moisture		
No.	Type					
					1	Brown to Grey Silty Clay, Little Sand, Trace Gravel, Moist (CL)
					2	
					3	
					4	
					5	
					6	
					7	
					8	Grey Weathered Siltstone, Moist (SM)
					9	
					10	EOB 10'
					11	
					12	
					13	
					14	
					15	
					16	
					17	
					18	
					19	
					20	
					21	
					22	
					23	
					24	
					25	

General Notes				Water Level Observations			
Date Started		2/13/2012		While Drilling		Water not observed	
Date Completed		2/13/2012		At Completion		NA	
Rig		Geoprobe		After Drilling		NA	
Crew Chief				Cave-In: Date/Time		Depth	
Logged		Checked		Water: Date/Time		Depth	

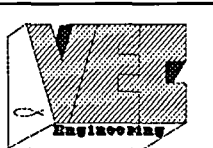


LOG OF TEST BORING

Project Name:		Newland, North Carolina			Boring No.:		P-22	
Location:		Newland, North Carolina			Sheet No.:		1 OF 1	
Contractor:		Mad Dawg Drilling			Date:		2/13/2012	
Drilling Method:		Geoprobe			Surface Elev.:			
					Borehole Dia.:			

Sampling Notes					Depth	Visual Classification and General Observations
Intervals		Blow Cnt. (N)	Recovery (in)	Moisture		
No.	Type					
					1	Brown to Grey Silty Clay, Little Sand, Trace Gravel, Moist (CL)
					2	
					3	
					4	
					5	
					6	
					7	
					8	Grey Weathered Siltstone, Moist (SM)
					9	
					10	EOB 10'
					11	
					12	
					13	
					14	
					15	
					16	
					17	
					18	
					19	
					20	
					21	
					22	
					23	
					24	
					25	

General Notes				Water Level Observations			
Date Started		2/13/2012		While Drilling		Water not observed	
Date Completed		2/13/2012		At Completion		NA	
Rig		Geoprobe		After Drilling		NA	
Crew Chief				Cave-In: Date/Time		Depth	
Logged		Checked		Water: Date/Time		Depth	



LOG OF TEST BORING

Project Name:		Newland, North Carolina			Boring No.:		P-23	
Location:		Newland, North Carolina			Sheet No.:		1 OF 1	
Contractor:		Mad Dawg Drilling			Date:		2/13/2012	
Drilling Method:		Geoprobe			Surface Elev.:			
					Borehole Dia.:			

Sampling Notes					Depth	Visual Classification and General Observations
Intervals		Blow Cnt. (N)	Recovery (in)	Moisture		
No.	Type					
					1	Brown to Grey Silty Clay, Little Sand, Trace Gravel, Moist (CL)
					2	
					3	
					4	
					5	
					6	Grey Weathered Siltstone, Moist (SM)
					7	
					8	
					9	
					10	
					10	EOB 10'
					11	
					12	
					13	
					14	
					15	
					16	
					17	
					18	
					19	
					20	
					21	
					22	
					23	
					24	
					25	

General Notes				Water Level Observations			
Date Started		2/13/2012		While Drilling		Water not observed	
Date Completed		2/13/2012		At Completion		NA	
Rig		Geoprobe		After Drilling		NA	
Crew Chief				Cave-In: Date/Time		Depth	
Logged		Checked		Water: Date/Time		Depth	



LOG OF TEST BORING

Project Name:		Newland, North Carolina			Boring No.:		P-24	
Location:		Newland, North Carolina			Sheet No.:		1 OF 1	
Contractor:		Mad Dawg Drilling			Date:		2/13/2012	
Drilling Method:		Geoprobe			Surface Elev.:			
					Borehole Dia.:			

Sampling Notes					Depth	Visual Classification and General Observations
Intervals		Blow Cnt. (N)	Recovery (in)	Moisture		
No.	Type					
					1	Fill - Sand and gravel, Moist
					2	Brown to Grey Silty Clay, Little Sand, Trace Gravel, Moist (CL)
					3	
					4	
					5	
					6	
					7	
					8	
					9	
					10	EOB 10'
					11	
					12	
					13	
					14	
					15	
					16	
					17	
					18	
					19	
					20	
					21	
					22	
					23	
					24	
					25	

General Notes				Water Level Observations			
Date Started		2/13/2012		While Drilling		Water not observed	
Date Completed		2/13/2012		At Completion		NA	
Rig		Geoprobe		After Drilling		NA	
Crew Chief				Cave-In: Date/Time		Depth	
Logged		Checked		Water: Date/Time		Depth	



LOG OF TEST BORING

Project Name:		Newland, North Carolina			Boring No.:		P-25	
Location:		Newland, North Carolina			Sheet No.:		1 OF 1	
Contractor:		Mad Dawg Drilling			Date:		2/13/2012	
Drilling Method:		Geoprobe			Surface Elev.:			
					Borehole Dia.:			

Sampling Notes					Depth	Visual Classification and General Observations
Intervals		Blow Cnt. (N)	Recovery (in)	Moisture		
No.	Type					
					1	Fill - Sand and gravel, Moist
					2	
					3	
					4	
					5	Brown to Grey Silty Clay, Little Sand, Trace Gravel, Moist (CL)
					6	
					7	
					8	
					9	Grey Weathered Siltstone, Moist (SM)
					10	EOB - 10'
					11	
					12	
					13	
					14	
					15	
					16	
					17	
					18	
					19	
					20	
					21	
					22	
					23	
					24	
					25	

General Notes				Water Level Observations			
Date Started		2/13/2012		While Drilling		Water not observed	
Date Completed		2/13/2012		At Completion		NA	
Rig		Geoprobe		After Drilling		NA	
Crew Chief				Cave-In: Date/Time		Depth	
Logged		Checked		Water: Date/Time		Depth	



NON RESIDENTIAL WELL CONSTRUCTION RECORD

North Carolina Department of Environment and Natural Resources- Division of Water Quality

WELL CONTRACTOR CERTIFICATION # 4108-B/3298-A

1. WELL CONTRACTOR:

Well Contractor (Individual) Name William Kicker
Well Contractor Company Name Macl Dewezine Inc
Street Address 1006 Camp Creek rd.
City or Town Iron Station State NC Zip Code 28080
(704) 732-0213
Area code Phone number

2. WELL INFORMATION:

WELL CONSTRUCTION PERMIT# N/A
OTHER ASSOCIATED PERMIT#(if applicable) N/A
SITE WELL ID #(if applicable) MW-2

3. WELL USE (Check One Box) Monitoring ☒ Municipal/Public ☐
Industrial/Commercial ☐ Agricultural ☐ Recovery ☐ Injection ☐
Irrigation ☐ Other ☐ (list use) _____

DATE DRILLED 7-17-12

4. WELL LOCATION:

1339 Newland Hwy
(Street Name, Numbers, Community, Subdivision, Lot No., Parcel, Zip Code)

CITY: Newland COUNTY Avery

TOPOGRAPHIC / LAND SETTING: (check appropriate box)

☒ Slope ☐ Valley ☐ Flat ☐ Ridge ☐ Other _____

LATITUDE 36° 4' 57.3" DMS OR 3X.XXXXXXXX DD

LONGITUDE 81° 54' 9.91" DMS OR 7X.XXXXXXXX DD

Latitude/longitude source: ☒ GPS ☐ Topographic map
(location of well must be shown on a USGS topo map and attached to this form if not using GPS)

5. FACILITY (Name of the business where the well is located.)

Facility Name 1339 Newland Hwy Facility ID# (if applicable) _____
Street Address Newland State NC Zip Code 28657
City or Town _____
Contact Name Tom Krasovec
Mailing Address 1225 West Pertis rd.
City or Town Sanit Johns State MI Zip Code 48879
(517) 719-4984
Area code Phone number

6. WELL DETAILS:

a. TOTAL DEPTH: 47'
b. DOES WELL REPLACE EXISTING WELL? YES ☐ NO ☒
c. WATER LEVEL Below Top of Casing: 40' FT.
(Use "+" if Above Top of Casing)

d. TOP OF CASING IS 0 FT. Above Land Surface*

*Top of casing terminated at/or below land surface may require a variance in accordance with 15A NCAC 2C .0118.

e. YIELD (gpm): N/A METHOD OF TEST _____

f. DISINFECTION: Type N/A Amount _____

g. WATER ZONES (depth):

Top	Bottom	Top	Bottom
<u>N/A</u>			

7. CASING: Depth	Diameter	Thickness/Weight	Material
Top <u>0</u> Bottom <u>37'</u>	Ft. <u>2"</u>	<u>Sch 40</u>	<u>Pvc</u>
Top _____ Bottom _____	Ft. _____	_____	_____
Top _____ Bottom _____	Ft. _____	_____	_____

8. GROUT: Depth	Material	Method
Top <u>0</u> Bottom <u>33</u>	Ft. <u>Portland</u>	<u>Trussid</u>
Top <u>33</u> Bottom <u>35</u>	Ft. <u>Bentonite</u>	<u>Power</u>
Top _____ Bottom _____	Ft. _____	_____

9. SCREEN: Depth	Diameter	Slot Size	Material
Top <u>37'</u> Bottom <u>47'</u>	Ft. <u>2</u> in. <u>D10</u> in. <u>Pvc</u>		
Top _____ Bottom _____	Ft. _____ in. _____ in. _____		
Top _____ Bottom _____	Ft. _____ in. _____ in. _____		

10. SAND/GRAVEL PACK: Depth	Size	Material
Top <u>35'</u> Bottom <u>47'</u>	Ft. <u>#2</u>	<u>Silica</u>
Top _____ Bottom _____	Ft. _____	_____
Top _____ Bottom _____	Ft. _____	_____

11. DRILLING LOG

Top	Bottom	Formation Description
<u>0</u>	<u>20</u>	<u>Silty Sand</u>
<u>20</u>	<u>47'</u>	<u>PWR</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

12. REMARKS:

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

SIGNATURE OF CERTIFIED WELL CONTRACTOR Thomas S. J. DATE 7/18/12

PRINTED NAME OF PERSON CONSTRUCTING THE WELL William Kicker



***Non RESIDENTIAL* WELL CONSTRUCTION RECORD**
North Carolina Department of Environment and Natural Resources- Division of Water Quality
WELL CONTRACTOR CERTIFICATION # 3298-A

1. WELL CONTRACTOR:

Russell E. Dye
Well Contractor (Individual) Name
Mad Dawg, Inc.
Well Contractor Company Name
1006 Camp Creek Road
Street Address
Iron Station NC 28080
City or Town State Zip Code
(704) 732-0213
Area code Phone number

2. WELL INFORMATION:

WELL CONSTRUCTION PERMIT# N/A
OTHER ASSOCIATED PERMIT#(if applicable) N/A
SITE WELL ID # (if applicable) MW-3

3. WELL USE (Check One Box) Monitoring ☒ Municipal/Public ☐
Industrial/Commercial ☐ Agricultural ☐ Recovery ☐ Injection ☐
Irrigation ☐ Other ☐ (list use) _____
DATE DRILLED 8/8/2012

4. WELL LOCATION:

1339 Newland Hwy
(Street Name, Numbers, Community, Subdivision, Lot No., Parcel, Zip Code)
CITY: Newland COUNTY Avery
TOPOGRAPHIC / LAND SETTING: (check appropriate box)
☒ Slope ☐ Valley ☐ Flat ☐ Ridge ☐ Other _____
LATITUDE 36 ° ' _____ " DMS OR 4.560 DD
LONGITUDE 81 ° ' _____ " DMS OR 54.991 DD
Latitude/longitude source: ☒ GPS ☐ Topographic map
(location of well must be shown on a USGS topo map and attached to this form if not using GPS)

5. FACILITY (Name of the business where the well is located.)

N/A N/A
Facility Name Facility ID# (if applicable)
1339 Newland Hwy
Street Address
Newland NC 28657
City or Town State Zip Code
Tom Krasovec
Contact Name
1225 West Parks Road
Mailing Address
Saint Johns MI 48879
City or Town State Zip Code
(517) 671-4984
Area code Phone number

6. WELL DETAILS:

- a. TOTAL DEPTH: 47'
b. DOES WELL REPLACE EXISTING WELL? YES ☐ NO ☒
c. WATER LEVEL Below Top of Casing: N/A FT.
(Use "+" if Above Top of Casing)

d. TOP OF CASING IS 0 FT. Above Land Surface*
*Top of casing terminated at/or below land surface may require a variance in accordance with 15A NCAC 2C .0118.

e. YIELD (gpm): N/A METHOD OF TEST N/A

f. DISINFECTION: Type N/A Amount N/A

g. WATER ZONES (depth):
Top N/A Bottom _____ Top _____ Bottom _____
Top _____ Bottom _____ Top _____ Bottom _____
Top _____ Bottom _____ Top _____ Bottom _____

7. CASING: Depth		Diameter	Thickness/Weight	Material
Top <u>0</u>	Bottom <u>37</u>	Ft. <u>2"</u>	<u>Sch40</u>	<u>PVC</u>
Top _____	Bottom _____	Ft. _____	_____	_____
Top _____	Bottom _____	Ft. _____	_____	_____

8. GROUT: Depth		Material	Method
Top <u>0</u>	Bottom <u>33</u>	Ft. <u>Portland</u>	<u>Tremie</u>
Top <u>33</u>	Bottom <u>35</u>	Ft. <u>Bentonite</u>	<u>Poured</u>
Top _____	Bottom _____	Ft. _____	_____

9. SCREEN: Depth		Diameter	Slot Size	Material
Top <u>37</u>	Bottom <u>47</u>	Ft. <u>2</u> in.	<u>.010</u> in.	<u>PVC</u>
Top _____	Bottom _____	Ft. _____ in.	_____ in.	_____
Top _____	Bottom _____	Ft. _____ in.	_____ in.	_____

10. SAND/GRAVEL PACK: Depth		Size	Material
Top <u>35</u>	Bottom <u>47</u>	Ft. <u>#2</u>	<u>screened sand</u>
Top _____	Bottom _____	Ft. _____	_____
Top _____	Bottom _____	Ft. _____	_____

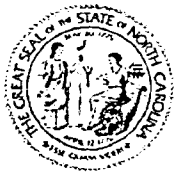
11. DRILLING LOG		Formation Description
Top	Bottom	
<u>0</u>	<u>12</u>	<u>silty sand</u>
<u>12</u>	<u>47</u>	<u>Rock</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

12. REMARKS:

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

Michael Brown 8/9/12
SIGNATURE OF CERTIFIED WELL CONTRACTOR DATE

Michael Brown
PRINTED NAME OF PERSON CONSTRUCTING THE WELL



Non RESIDENTIAL WELL CONSTRUCTION RECORD

North Carolina Department of Environment and Natural Resources- Division of Water Quality

WELL CONTRACTOR CERTIFICATION # 3298-A

1. WELL CONTRACTOR:

Russell E. Dye

Well Contractor (Individual) Name

Mad Dawg, Inc.

Well Contractor Company Name

1006 Camp Creek Road

Street Address

Iron Station

NC

28080

City or Town

State

Zip Code

(704) 732-0213

Area code Phone number

2. WELL INFORMATION:

WELL CONSTRUCTION PERMIT# N/A

OTHER ASSOCIATED PERMIT#(if applicable) N/A

SITE WELL ID #(if applicable) MW-4

3. WELL USE (Check One Box) Monitoring ☒ Municipal/Public ☐

Industrial/Commercial ☐ Agricultural ☐ Recovery ☐ Injection ☐

Irrigation ☐ Other ☐ (list use) _____

DATE DRILLED 8/8/2012

4. WELL LOCATION:

1339 Newland Hwy

(Street Name, Numbers, Community, Subdivision, Lot No., Parcel, Zip Code)

CITY: Newland

COUNTY Avery

TOPOGRAPHIC / LAND SETTING: (check appropriate box)

☒ Slope ☐ Valley ☐ Flat ☐ Ridge ☐ Other _____

LATITUDE 36 ° ' " DMS OR 4.569 DD

LONGITUDE 81 ° ' " DMS OR 55.005 DD

Latitude/longitude source: ☒ GPS ☐ Topographic map
(location of well must be shown on a USGS topo map and attached to this form if not using GPS)

5. FACILITY (Name of the business where the well is located.)

N/A

Facility Name

N/A

Facility ID# (if applicable)

1339 Newland Hwy

Street Address

Newland

NC

28657

City or Town

State

Zip Code

Tom Krasovec

Contact Name

1225 West Parks Road

Mailing Address

Saint Johns

MI

48879

City or Town

State

Zip Code

(517) 719-4984

Area code Phone number

6. WELL DETAILS:

a. TOTAL DEPTH: 43'

b. DOES WELL REPLACE EXISTING WELL? YES ☐ NO ☒

c. WATER LEVEL Below Top of Casing: N/A FT.
(Use "+" if Above Top of Casing)

d. TOP OF CASING IS 0 FT. Above Land Surface*

*Top of casing terminated at/or below land surface may require a variance in accordance with 15A NCAC 2C .0118.

e. YIELD (gpm): N/A METHOD OF TEST N/A

f. DISINFECTION: Type N/A Amount N/A

g. WATER ZONES (depth):

Top N/A Bottom _____ Top _____ Bottom _____

Top _____ Bottom _____ Top _____ Bottom _____

Top _____ Bottom _____ Top _____ Bottom _____

7. CASING: Depth Diameter Thickness/Weight Material

Top 0 Bottom 33 Ft. 2" Sch40 PVC

Top _____ Bottom _____ Ft. _____ _____

Top _____ Bottom _____ Ft. _____ _____

8. GROUT: Depth Material Method

Top 0 Bottom 29 Ft. Portland Tremie

Top 29 Bottom 31 Ft. Bentonite Poured

Top _____ Bottom _____ Ft. _____ _____

9. SCREEN: Depth Diameter Slot Size Material

Top 33 Bottom 43 Ft. 2 in. .010 in. PVC

Top _____ Bottom _____ Ft. _____ in. _____ in. _____

Top _____ Bottom _____ Ft. _____ in. _____ in. _____

10. SAND/GRAVEL PACK:

Depth Size Material

Top 31 Bottom 43 Ft. #2 screened sand

Top _____ Bottom _____ Ft. _____ _____

Top _____ Bottom _____ Ft. _____ _____

11. DRILLING LOG

Top Bottom Formation Description

0 / 10 silty sand

10 / 43 Rock

_____ / _____ _____

_____ / _____ _____

_____ / _____ _____

_____ / _____ _____

_____ / _____ _____

_____ / _____ _____

_____ / _____ _____

_____ / _____ _____

_____ / _____ _____

_____ / _____ _____

_____ / _____ _____

_____ / _____ _____

_____ / _____ _____

_____ / _____ _____

_____ / _____ _____

_____ / _____ _____

_____ / _____ _____

_____ / _____ _____

_____ / _____ _____

_____ / _____ _____

_____ / _____ _____

_____ / _____ _____

_____ / _____ _____

_____ / _____ _____

_____ / _____ _____

_____ / _____ _____

_____ / _____ _____

12. REMARKS:

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

Russell E. Dye 8/9/12
SIGNATURE OF CERTIFIED WELL CONTRACTOR DATE

Michael Brown
PRINTED NAME OF PERSON CONSTRUCTING THE WELL

FIELD DATA

LOW FLOW SAMPLING DATA SHEET

SITE: 1339 NEWLAND HIGHWAY																CONSULTING FIRM: VEC Engineering, PLLC																															
DATE: AUGUST 22, 2012																FIELD PERSONNEL: Tom Krasovec																															
WEATHER: PARTLY SUNNY 70																																															
MONITOR WELL #: MW-1																WELL DEPTH (ft): 52'																SCREENED/OPEN INTERVAL: 42' - 52'															
WELL PERMIT #:																WELL DIAMETER (in): 2																TOC (EL): 3712.02															
PIF/FID READINGS: BACKGROUND: _____																																															
PUMP INTAKE DEPTH (ft. below TOC): 48'																																															
BENEATH OUTER CAP: _____																																															
DEPTH TO WATER BEFORE Pumping (ft below TOC): 24.45'																																															
BENEATH INNER CAP: _____																																															
TIME	PURGING	SAMPLING	Ph (ph units) +/- 0.1		SPECIFIC CONDUCTIVITY (mS/cm) +/- 3%		REDOX POTENTIAL (Mv) +/- 10 Mv		DISSOLVED OXYGEN (mg/L) +/- 10%		TURBIDITY (NTU) +/- 10%		TEMPERATURE (Degrees C) +/- 3%		PUMPING RATE (ml/min)	Depth to Water (ft)																															
			READING	CHANGE	READING	CHANGE	READING	CHANGE	READING	CHANGE	READING	CHANGE	READING	CHANGE			READING	CHANGE																													
9:30	X		4.62		0.04		270.90		7.29		MILKY		11.93		500	24.45																															
9:40	X		4.48	0.14	0.03	16.67%	273.30	-2.40	7.38	-1.22%	CLOUDY		11.87	0.51%	500	21.50																															
9:50	X		4.44	0.04	0.03	0.00%	273.10	0.20	7.45	-0.94%	CLEAR		11.85	0.17%	500	21.10																															
10:00		X	4.52	-0.08	0.03	0.00%	272.80	0.30	7.11	4.78%	CLEAR		11.87	-0.17%	500	20.50																															

* Indicator parameters have stabilized when 3 consecutive readings are within: +/- 0.1 for PH; +/- 3% for Specific Conductivity and Temperature; +/- 10mv for Redox Potential; +/- 10% for DO and Turbidity

LOW FLOW SAMPLING DATA SHEET

SITE: <u>1339 NEWLAND HIGHWAY</u>				CONSULTING FIRM: <u>VEC Engineering, PLLC</u>			
DATE: <u>AUGUST 22, 2012</u>				FIELD PERSONNEL: <u>Tom Krasovec</u>			
WEATHER: <u>PARTLY SUNNY 70</u>							
MONITOR WELL #: <u>MW-2</u>		WELL DEPTH (ft): <u>47'</u>		SCREENED/OPEN INTERVAL: <u>37 - 47'</u>			
WELL PERMIT #:		WELL DIAMETER (in): <u>2</u>		TOC (EL): <u>3704.49'</u>			
PIF/FID READINGS: BACKGROUND: _____ PUMP INTAKE DEPTH (ft. below TOC): _____ BENEATH OUTER CAP: _____ DEPTH TO WATER BEFORE Pumping (ft below TOC): <u>21.65'</u> BENEATH INNER CAP: _____							

TIME	PURGING	SAMPLING	Ph (ph units) +/- 0.1		SPECIFIC CONDUCTIVITY (mS/cm) +/- 3%		REDOX POTENTIAL (Mv) +/- 10 Mv		DISSOLVED OXYGEN (mg/L) +/- 10%		TURBIDITY (NTU) +/- 10%		TEMPERATURE (Degrees C) +/- 3%		PUMPING RATE (ml/min)	Depth to Water (ft)
			READING	CHANGE	READING	CHANGE	READING	CHANGE	READING	CHANGE	READING	CHANGE	READING	CHANGE		
12:10	X		4.64		0.107		248.1		5.50		CLOUDY		12.27		500	21.65'
12:20	X		4.60	0.04	0.114	-6.14%	248.50	-0.40	4.57	20.35%	CLEAR		12.22	0.41%	500	18.40
12:30	X		4.59	0.01	0.116	-0.20%	242.3	6.200	4.6	-0.030	CLEAR		12.22	0.000	500	18.10
12:40		X	4.58	0.01	0.113	0.30%	241.7	0.600	4.63	-0.030	CLEAR		12.22	0.000	500	17.80

* Indicator parameters have stabilized when 3 consecutive readings are within: +/- 0.1 for PH; +/- 3% for Specific Conductivity and Temperature; +/- 10mv for Redox Potential; +/- 10% for DO and Turbidity

LOW FLOW SAMPLING DATA SHEET

SITE: <u>1339 NEWLAND HIGHWAY</u>				CONSULTING FIRM: <u>VEC Engineering, PLLC</u>			
DATE: <u>AUGUST22, 2012</u>				FIELD PERSONNEL: <u>Tom Krasovec</u>			
WEATHER: <u>PARTLY SUNNY 70</u>							
MONITOR WELL #: <u>MW-3</u>		WELL DEPTH (ft): <u>47'</u>		SCREENED/OPEN INTERVAL: <u>37 - 47'</u>			
WELL PERMIT #:		WELL DIAMETER (in): <u>2</u>		TOC (EL): <u>3694.74'</u>			
PIF/FID READINGS: BACKGROUND: _____				PUMP INTAKE DEPTH (ft. below TOC): <u>45'</u>			
BENEATH OUTER CAP: _____				DEPTH TO WATER BEFORE Pumping (ft below TOC): <u>11.33'</u>			
BENEATH INNER CAP: _____							

TIME	PURGING	SAMPLING	Ph (ph units) 0.1 +/-		SPECIFIC CONDUCTIVITY (mS/cm) +/- 3%		REDOX POTENTIAL (Mv) +/- 10 Mv		DISSOLVED OXYGEN (mg/L) +/- 10%		TURBIDITY (NTU) +/- 10%		TEMPERATURE (Degrees C) +/- 3%		PUMPING RATE (ml/min)	Depth to Water (ft)
			READING	CHANGE	READING	CHANGE	READING	CHANGE	READING	CHANGE	READING	CHANGE	READING	CHANGE		
11:05	x		5.22	NA	0.637	NA	315.3	NA	5.87	NA	MILKY	NA	13.21	NA	500	11.3'
11:25	x		5.03	-0.19	0.287	122.0%	268.2	47.1	5.57	5.1%	MILKY		12.67	4.1%	250	19.8'
11:35	x		5.09	0.06	0.306	-6.2%	251.8	16.4	5.44	2.3%	CLOUDY		12.96	-2.3%	150	23.8'
11:45	x		5.03	-0.06	0.301	1.7%	248.5	3.3	5.38	1.1%	CLOUDY		12.95	0.1%	150	25.5'
11:50	x		5.12	0.09	0.296	1.7%	239.3	9.2	5.23	2.8%	CLOUDY		13.13	-1.4%	100	26.5'
11:55		x	5.09	-0.03	0.296	0.0%	240.1	-0.8	5.11	2.3%	CLOUDY		13.08	0.4%	100	27.3'

* Indicator parameters have stabilized when 3 consecutive readings are within: +/- 0.1 for PH; +/- 3% for Specific Conductivity and Temperature; +/- 10mv for Redox Potential; +/- 10% for DO and Turbidity

LOW FLOW SAMPLING DATA SHEET

SITE: <u>1339 NEWLAND HIGHWAY</u>				CONSULTING FIRM: <u>VEC Engineering, PLLC</u>												
DATE: <u>AUGUST 22, 2012</u>				FIELD PERSONNEL: <u>Tom Krasovec</u>												
WEATHER: <u>PARTLY SUNNY 70</u>																
MONITOR WELL #: <u>MW-4</u>		WELL DEPTH (ft): <u>43'</u>		SCREENED/OPEN INTERVAL: <u>34 - 43'</u>												
WELL PERMIT #:		WELL DIAMETER (in): <u>2</u>		TOC (EL): <u>3691.56'</u>												
PIF/FID READINGS: BACKGROUND: _____ PUMP INTAKE DEPTH (ft. below TOC): <u>40'</u> BENEATH OUTER CAP: _____ DEPTH TO WATER BEFORE Pumping (ft below TOC): <u>9.7'</u> BENEATH INNER CAP: _____																
TIME	PURGING	SAMPLING	Ph (ph units) +/- 0.1		SPECIFIC CONDUCTIVITY (mS/cm) +/- 3%		REDOX POTENTIAL (Mv) +/- 10 Mv		DISSOLVED OXYGEN (mg/L) +/- 10%		TURBIDITY (NTU) +/- 10%		TEMPERATURE (Degrees C) +/- 3%		PUMPING RATE (ml/min)	Depth to Water (ft)
			READING	CHANGE	READING	CHANGE	READING	CHANGE	READING	CHANGE	READING	CHANGE	READING	CHANGE		
10:20	X		4.57		0.319		284.8		3.30		CLOUDY		12.84		500	9.7'
10:30	X		4.58	-0.01	0.316	0.95%	282.6	2.200	3.19	3.45%	CLOUDY		12.33	4.14%	250	12'
10:40	X		4.59	-0.01	0.325	-2.77%	279.9	2.700	3.19	0.00%	CLOUDY		12.21	0.98%	250	15'
10:50	X		4.58	0.01	0.329	-1.22%	284.4	-4.500	2.97	7.41%	SL. CLOUDY		12.18	0.25%	250	16'
11:00		X	4.58	0.00	0.33	-0.30%	280.1	4.300	3.05	-2.62%	SL. CLOUDY		12.15	0.25%	250	17'

* Indicator parameters have stabilized when 3 consecutive readings are within: +/- 0.1 for PH; +/- 3% for Specific Conductivity and Temperature; +/- 10mv for Redox Potential; +/- 10% for DO and Turbidity

NON-HAZARDOUS WASTE MANIFEST

Please print or type (Form designed for use on elite (12 pitch) typewriter)

NON-HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No. NCP042111007		Manifest Document No. 44274		2. Page 1 of 1	
3. Generator's Name and Mailing Address Household Mortgage and Funding 28525 North Riverwoods Blvd Mettawa IL 60045				Att: Chris Phillips 1330 Newland Hwy Newland N.C.			
4. Generator's Phone (224) 544-2838							
5. Transporter 1 Company Name WEST CENTRAL ENVIRONMENTAL CORP		6. US EPA ID Number NYD000708271		A. State Transporter's ID		B. Transporter 1 Phone 518 272-8801	
7. Transporter 2 Company Name		8. US EPA ID Number		C. State Transporter's ID		D. Transporter 2 Phone	
9. Designated Facility Name and Site Address Heritage-WTI, Inc. 1250 Saint George Street East Liverpool OH 43920		10. US EPA ID Number OHD080613541		E. State Facility's ID		F. Facility's Phone 800 832-1889	
11. WASTE DESCRIPTION				Containers		13. Total Quantity	
				No. Type		14. Unit Wt./Vol.	
a. UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE LIQUID, N.O.S (DIELDRIN, BETA-BHC)				001 TT		85010 G	
b.							
c.							
d.							
G. Additional Descriptions for Materials Listed Above a. APPROVAL 120252-1 (WATER WITH PESTICIDES) ERG#171 b.				H. Handling Codes for Wastes Listed Above a. c. b. d.			
15. Special Handling Instructions and Additional Information TWCE JN: 44274-S-11 EMERGENCY CONTACT 517-719-4984							
16. GENERATOR'S CERTIFICATION: I hereby certify that the contents of this shipment are fully and accurately described and are in all respects in proper condition for transport. The materials described on this manifest are not subject to federal hazardous waste regulations.							
Printed/Typed Name Thomas Krasovec/Sr HMF				Signature [Signature]		Date Month Day Year 10 2 11	
17. Transporter 1 Acknowledgement of Receipt of Materials							
Printed/Typed Name David B. Lowmeyer				Signature [Signature]		Date Month Day Year 10 2 11	
18. Transporter 2 Acknowledgement of Receipt of Materials							
Printed/Typed Name				Signature		Date Month Day Year	
19. Discrepancy Indication Space							
20. Facility Owner or Operator: Certification of receipt of the waste materials covered by this manifest, except as noted in item 19.							
Printed/Typed Name				Signature		Date Month Day Year	

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator ID Number NCP042111007	2. Page 1 of 1	3. Emergency Response Phone (517) 719-4984	4. Manifest Tracking Number 008426375 JJK	
5. Generator's Name and Mailing Address HOUSEHOLD MORTGAGE AND FUNDING 26526 NORTH RIVERWOODS BLVD METTAWA IL 60045 Generator's Phone: 224 544-2938		Generator's Site Address (if different than mailing address) NEWLANDS PESTICIDES Site 1338 NEWLAND HIGHWAY AUGUSTA, NC 28657				
6. Transporter 1 Company Name WEST CENTRAL ENVIRONMENTAL CORP.		U.S. EPA ID Number NYD0000708271				
7. Transporter 2 Company Name		U.S. EPA ID Number				
8. Designated Facility Name and Site Address HERITAGE WTI, INC. 1250 SAINT GEORGE STREET EAST LIVERPOOL OH 43920 Facility's Phone: 886 832-1888		U.S. EPA ID Number DHD880813541				
9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No. Type		11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
	1. A3077, Hazardous waste, solid, n.o.s. (4,4, DDT, TOXAPHENE) 9, PGIII	001	011	17	Y	0005 0015 0020
	2.					
	3.					
	4.					
14. Special Handling Instructions and Additional Information 1) APPROVAL: 129262-2 (SOIL WITH PESTICIDES) ERG#171 WCE J/N: 447132-7-11						
15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.						
Generator's/Offor's Printed/Typed Name Thomas Krasovec		Signature [Signature]			Month 7	Day 20
16. International Shipments Transporter signature (for exports only):		<input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S.		Port of entry/exit: Date leaving U.S.:		
17. Transporter Acknowledgment of Receipt of Materials Transporter 1 Printed/Typed Name Richard A M-Int'l		Signature [Signature]			Month 07	Day 20
Transporter 2 Printed/Typed Name		Signature			Month	Day
18. Discrepancy						
18a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection						
Manifest Reference Number:						
18b. Alternate Facility (or Generator) U.S. EPA ID Number						
Facility's Phone:						
18c. Signature of Alternate Facility (or Generator) Month Day Year						
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)						
1.		2.		3.		4.
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a						
Printed/Typed Name		Signature			Month	Day



**LAND DISPOSAL RESTRICTIONS (LDR)
NOTICE AND CERTIFICATION**

1 of 1

Generator Name: NEWLANDS PESTICIDES SITE

Wastestream No.: 129252 - 2

EPA I.D. No.: NCP042111007

Common Name: SOIL WITH PESTICIDES

(1) Waste Does Not Meet Applicable Treatment Standards: This is a restricted waste that does not meet the applicable treatment standards set forth in Subpart D of 40 CFR Part 268.

I certify that the information provided on this and any additional pages of this LDR notification is true, accurate and complete.

Authorized Signature: _____

Print Name: Thomas Kasovac

Company/Title: VBC Engineering

Date: 7/20/11

(1) Manifest Page/Line	(2) Hazardous Waste Codes	(3) Wastewater Or Non Wastewater	(4) Subcategory (if applicable)	(5) Underlying Constituents	(6) Applicable Certification
	D005 D015 D020	NWW	48	NONE	1

Subcategory	Description
48	TC WASTE MANAGED IN NON-CWA SYSTEM

COPY

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number					
		NCPR042111007		44731-7-11	008426374 JJK					
5. Generator's Name and Mailing Address			Generator's Site Address (if different than mailing address)							
HOUSEHOLD MORTGAGE AND FUNDING 26526 NORTH RIVERWOODS BLVD METTAWA IL 60046 Generator's Phone: 312 544 2838			At: CHRIS PHILIPP 1330 NEWLAND HIGHWAY NEWLAND NC							
6. Transporter 1 Company Name			U.S. EPA ID Number							
WEST CENTRAL ENVIRONMENTAL CORP.			NYD000708271							
7. Transporter 2 Company Name			U.S. EPA ID Number							
8. Designated Facility Name and Site Address			U.S. EPA ID Number							
HERITAGE-WTI, INC. 1250 SAINT GEORGE STREET EAST LIVERPOOL OH 43920 Facility's Phone: 360 832 1882			OH0000013541							
GENERATOR	9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers		11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes			
			No.	Type						
	1.	HA3077, Hazardous waste, solid, n.o.s. (4,4, DDT, TOXAPHENE) Q, PGIII	001	CM	12 Y		0005 0015 0020			
	2.									
	3.									
4.										
14. Special Handling Instructions and Additional Information										
1) APPROVAL #128252-2 (SOIL WITH PESTICIDES) ERG#171 WCE JIN: 44731-7-11										
15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.										
Generator's/Officer's Printed/Typed Name			Signature			Month	Day	Year		
Thomas J. Kasper for WCE			[Signature]			7	19	11		
INTL	16. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S.		Port of entry/exit: Date leaving U.S.:							
	Transporter signature (for exports only):									
TRANSPORTER	17. Transporter Acknowledgment of Receipt of Materials									
	Transporter 1 Printed/Typed Name			Signature			Month	Day	Year	
David B. Lauerway			[Signature]			7	19	11		
Transporter 2 Printed/Typed Name			Signature			Month	Day	Year		
DESIGNATED FACILITY	18. Discrepancy									
	18a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection									
	Manifest Reference Number:									
	18b. Alternate Facility (or Generator)			U.S. EPA ID Number						
	Facility's Phone:									
18c. Signature of Alternate Facility (or Generator)						Month	Day	Year		
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)										
1.		2.		3.		4.				
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a										
Printed/Typed Name				Signature				Month	Day	Year

**LAND DISPOSAL RESTRICTIONS (LDR)
NOTICE AND CERTIFICATION****Generator Name: NEWLANDS PESTICIDES SITE****Wastestream No.: 129252 - 2****EPA I.D. No.: NCP042111007****Common Name: SOIL WITH PESTICIDES**

(1) Waste Does Not Meet Applicable Treatment Standards: This is a restricted waste that does not meet the applicable treatment standards set forth in Subpart D of 40 CFR Part 268.

I certify that the information provided on this and any additional pages of this LDR notification is true, accurate and complete.

Authorized Signature: [Signature] Print Name: Thomas J. Krasovec

Company/Title: VEC Engineering / President Date: 7/19/11

(1) Manifest Page/Line	(2) Hazardous Waste Codes	(3) Wastewater Or Non Wastewater	(4) Subcategory (if applicable)	(5) Underlying Constituents	(6) Applicable Certification
	D005 D015 D020	NWW	48	NONE	1

Subcategory	Description
48	TC WASTE MANAGED IN NON-CWA SYSTEM

COPY

File Disc